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TIMES PAST — THE TIMES

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Ripples in the pool

Perhaps there was no alternative to last week's surprising and even bizarre allocation of the advanced further education pool to polytechnics and colleges. Inadequate data, chaotic cost comparisons, an almost impossible timetable, the inevitable political pressures, all made it very difficult for the Stephen Jones group to devise a recommended distribution of the pool that was financially practicable, politically possible, and logically defensible. So any distortions or deficiencies in the eventual settlement should not necessarily be blamed on the work of the group.

Yet nor can they be overlooked. First there are the technical shortcomings of the system of common and further funding. The group chose this as the best means to make the theory of how much polytechnics and colleges should cost fit the reality of how much they do cost. Again it is easy to be critical from the outside. But a system of accounting which assesses the common funding appropriate for the North East London and Oxford Polytechnics as about equal (£9.7m and £10.2m respectively), and which then doubles the net allocation to NELP and cuts the same total for Oxford by 15 per cent through the mechanism of further funding, must raise important doubts.

If such violent adjustments are necessary to make the theory of the new system fit the reality of historic costs, it has to be asked whether it can ever become an effective policy instrument. In particular the message of the system of common and further funding is unclear. Is it really true that Oxford is twice as efficient an institution as NELP? If it is, is it the intention of the new system of funding to squeeze costs at NELP, by acceptable if not easy stages, until they approximate to those at Oxford? There is some evidence to suggest that this is the drift, if not the firm intention, of the new system. According to next year's distribution the more further funding an institution has required the greater the cut in its effective income. Or is Oxford being asked to operate within an unacceptably tight budget?

On the other hand it can be argued that some combination of common and further funding should be a permanent feature of polytechnic and college funding. After all, the non-university sector is historically and desirably much more heterogeneous than the university sector so the expectation that costs should be easily comparable (and reducible?) is less reasonable. Polytechnics and colleges do different things in different ways.

The cost implications of this very necessary diversity should be fully understood but should not be allowed to dominate entirely the future funding of the polytechnics. It would be a mistake to attempt to tie them into a financial straitjacket.

Of course, there are some who would go considerably further and argue that the distortions of the common/further funding system graphically illustrate the impossibility and idiocy of centralized bureaucratic financial planning. To most of us, however, these distortions demonstrate the need for a workable national body that can not only improve and refine the new system for funding polytechnics and colleges but also provide a proper political and educational context in which the implications of any funding system can be properly worked out. We need to be able to balance with reasonable sophistication the financial costs of diversity against the educational costs of too much uniformity.

The second cause for concern about the distribution of next year's pool arises from the contrasting treatment of the polytechnics and of the colleges of higher education. Some, of course, may be tempted to see this as deliberate discrimination, a clear if covert determination to force the 10 or 12 most vulnerable colleges to close. Others, in contrast, will see the difference in treatment as another bizarre outcome of over-ambitious financial planning.

The best assessment lies between these two extremes. The discrimination against the colleges is deliberate, in the sense that it is the direct result of an explicit decision to treat polytechnics and "other maintained establishments" (ie colleges of higher education and further education colleges that offer some advanced courses) on different financial bases. It is a semi-accident, in that a line had to be drawn between substantial higher education institutions and isolated advanced courses because to fund both according to a uniform formula would make no sense, and the colleges just happen to be on the wrong side.

What this illustrates in a minor but still disturbing way is a problem that would have been a major flaw in the Department of Education and Science's own Model B proposal for a quasi-UGC for the polytechnics and colleges – where to draw the frontier of higher education.

In fact under the Model B proposal the colleges of higher education would have been on the right side of the line, although this would not necessarily have been a safeguard against a funding bias towards the polytechnics. But the problem of the frontier would not have gone away. After all, it is as illogical to discriminate in favour of a small, perhaps struggling, and still essentially monotechnic college of higher education and against a large and thriving college of technology with a substantial stake in advanced courses, as it is to treat Plymouth or Sunderland polytechnics in a markedly more favourable way than Hull or Ealing Colleges of Higher Education.

Again, it is a question that can only be answered, and then only partially, by a national body. As with the balance between extra costs and essential diversity, so the frontier between higher and further education can only be policed by the new national body and by the wider and more sophisticated public debate that its existence will provoke. But it is important that the form of the national body itself should not foreclose that debate, by being itself an answer to the question. This was, and perhaps, is the greatest threat contained in Model B.

The cost of loans to students

The news that Sir Keith Joseph is trying again to find an acceptable method of introducing student loans is neither surprising nor, probably, a reason for undue concern for the defenders of grants. Conservative ministers have dusted off that particular file on numerous occasions without ever coming close to dismantling the grants system and Sir Keith may well meet with equally little success.

It was, after all, only last year that Dr Rhodes Boyson was travelling the world in search of evidence to support changes in student finance. He was to be found at press conferences extolling the virtues of the Swedish system while civil servants prepared a detailed report on the feasibility of switching at least partially to loans.

Yet, when it came to weighing up the political considerations and the initial cost of a change, he realized that he could not carry his colleagues with him.

With an election little more than two years away at most, it would be a brave Cabinet which embarked on such a lengthy and controversial exercise with no prospect of short-term benefits. However, Sir Keith champions loans not for financial gain but in the name of social justice, arguing that the relatively poor are subsidising through taxes those who are likely to be better off in the long run.

Such an argument ignores the likely effect of loans on the already lamentably small proportion of students from working class backgrounds. Particularly in a time of recession, there can be no doubt that a further erosion of the value of student grants would prove a serious disincentive to participation in higher education. Britain is low enough in the league table of higher education numbers without creating another obstacle.

If Sir Keith genuinely wants a more equitable system of student support, he would do better to concentrate on improving the lot of those students on largely vocational courses who have to compete for an ever-diminishing pool of discretionary awards. A review of the distribution of grants would be a valuable exercise even if it did not have the "intellectual attraction" for Sir Keith of loans.

History Workshop's hard times

The financial crisis that faces *History Workshop*, the likely journal produced by a collective of socialist historians, is one, sadly, that is likely to become the common experience of these little journals which circulate on the fringes of higher education but add considerably to the intellectual life of their disciplines.

History Workshop needs £10,000, a small sum even by the meagre standards of the austere present, but one difficult to raise from a small and shrinking base of subscribers. Inevitably the subscribers to such journals are younger academics and researchers sometimes without the material protection of tenure; freelances – intellectuals; postgraduates who are declining in number in many disciplines because of the cuts in higher education and who find it increasingly difficult to afford the prices such journals are forced to charge in an attempt to keep up with costs; or libraries, which have so much difficulty in keeping intact their series of major established journals that they have no money for small, alternative journals like *History Workshop*.

The way out of this cruel dilemma is not clear. The intellectual quality of these little journals arises directly from their independence from established networks, institutions, and publishers. The price that must be paid for such independence is often chronic financial insecurity. Yet the contribution of such journals to their disciplines should be properly recognized. Not all are socialist like *History Workshop* but most combine necessary iconoclasm with equally necessary seriousness. It should be remembered that freedom to publish and be published is as important an ingredient of academic freedom as tenure and similar more conspicuous safeguards.

Laurie Taylor

Now then, Mr Karanstaletsky, I understand you wish to apply for a postgraduate place in this department?

Oh yes, sir.

My word, how very nice it is to interview someone who comes straight to the point. Certainly a quality I could wish to see more evident in our domestic students. Yes indeed. And your principal area of interest, Mr Karanstaletsky, is economics?

Oh yes, sir.

Excellent. Excellent. So refreshing to find an applicant who has a fine grasp of the kind of department to which he has applied. Now, I wonder if I might ask you, and please understand that there's no need at all for you to give a detailed answer to this question, what Dr Blantyre and myself are after is really nothing much more than some sort of immediate reaction, I wonder if I might ask you, and incidentally could I say at this point that both of us have already been very much impressed by your general, how could I put it, your general air of suitability, may I just ask you which particular aspect of economics actually interests you most, that is, if there is one?

Oh yes, sir.

Jolly good. You can't say fairer than that. Straight to the point. Like an arrow. Don't you agree Dr Blantyre? Do you know something, Mr Karanstaletsky – good heavens, I nearly called you *Doctor* Karanstaletsky in anticipation of your forthcoming doctorate . . . *Doctor* Karanstaletsky . . . *Doctor* Karanstaletsky . . . it has a nice ring – do you know something Mr Karanstaletsky, you strike me as a man who's given a great deal of thought to intellectual matters. But have you actually, and I only ask because you have understandably not filled in most sections of the application form – such a silly form anyway and why should people of your evident refinement and sensitivity have to constrain themselves within such bureaucratic categories as Name, Address and Date of Birth – but have you actually an undergraduate degree in a subject which is somehow related, albeit in any sort of roundabout way, to the general area of economics or something like it?

Oh yes, sir.

***Splendid. Absolutely splendid.* I knew we need have no anxieties on that score. Eh, Dr Blantyre? What did I tell you? As soon as Mr Karanstaletsky came through the door I knew that he was graduate material. Yes, indeed. Well, I really don't think we need to waste any more time with all these routine questions. Welcome to the department of economics, Mr Karanstaletsky. *Welcome. Welcome.* Now, if you'll just pop next door to Miss Danvers, she'll show you everything you need to know and exactly where to sign. So, from Dr Blantyre and myself, its a case of *au revoir*. Oh, don't bother with the door, Mr Karanstaletsky. That's what the porters are paid for. *Bye.* D'you know, Dr Blantyre, I used to think that there was something a little immoral about accepting all these foreign students just to get their fees and a fat departmental bonus, particularly when the restrictions on quota meant that we were excluding better qualified people who had less money. But after a time you suddenly realize that they really are getting in our pocket. Say what you like, the Robbins principle is still at work. Know what I mean, Blantyre?**

Oh yes, sir.

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Thousands lose in redundancy cash payout

by Ngaio Crequer and David Jobbins

Thousands of college lecturers and university non-teaching staff face losing their jobs without the same level of redundancy compensation as that offered to university academics.

The Government this week announced that severance terms of up to £55,000 would be offered to university teachers to induce them to leave their jobs by September 1984.

But a comparable scheme for the 4000 polytechnic and college lecturers projected to lose their jobs over the next two years is as remote as ever, and the signs are that university secretarial, manual and technical staff will not be treated in the same generous way.

In a written Commons statement announcing the university scheme this week, Sir Keith Joseph Secretary of State for Education made it clear that he had been impressed by the fact that the majority of academic staff had tenure. He wrote: "More generous compensation that would otherwise be available is therefore appropriate.

"In these exceptional circumstances . . . for academic and related staff whose service is terminated on or before September 30, 1984 the cost of compensation on the terms proposed by the Committee of Vice Chancellors and Principals (with two modifications) should be eligible for reimbursement from the funds to be allocated to the universities for restructuring on the recommendation of the University Grants Committee."

The alterations are that for staff over 50 there will be no improvement on present arrangements and pensions will continue to be index-linked rather than on the age of 55.

The UGC was this week drafting a letter to go to universities, probably next week, telling them how the scheme will work. Conspicuously absent from the announcement was any mention of how much extra money the Government is prepared to give to the UGC to pay for the scheme.

The CVCP was meeting the UGC this week to put this question. So far £70m has been set aside for restructuring but this will not be enough for the amount of redundancies required. But it is understood that the Government does not believe the number will be anywhere near as great as the universities claim.

The CVCP also wants to know when the scheme will be introduced as they expect the first redundancies this term. The court case involving the Institute of Orthopaedics, which has issued compulsory redundancy notices to three academics, was postponed last week until today.

A decision is needed urgently on the status of non-teaching staff. The CVCP discussed, but decided against drawing up a similar scheme, at a lower level, for other staff, preferring to leave it to the Government, although it has said it wants fair treatment.

The committee gave the scheme a cautious welcome last week saying it went some way towards assisting the universities in the exceedingly difficult situation created by the cuts. Dr Anthony Kelly, Surrey's vice-chancellor, said the decision would do nothing to cover the cash deficits faced by universities with savage reductions in funds.

Mr Laurie Sapper, AUT general secretary, said it was stupid spending millions of pounds helping people out of jobs when less could be spent on keeping them in jobs. His union was still firmly opposed to compulsory redundancy.

Leaders of non-teaching staff in

continued on page 3

The bother of a 30-mile road journey from Morecambe to Grange-over-Sands may soon be eased – if a project drawn up by two Lancaster University students succeeds. Kirn Rattan (left) who is studying psychology, and physics student Andy Smith hope to operate a hovercraft service across the six miles of Morecambe Bay for holidaymakers at about £3 a trip. Their hovercraft is past the design stage and they expect it to be airbourne by Easter. All that remains them is safety testing and the go-ahead to offer the service during the summer. It could be operating by this summer – or at the latest by 1983.

Parker's lecture peters out

Leicester University's fourth Jubilee Lecture, which was scheduled to take place this week, turned out to be rather too topical for its own good.

It was to have been given by Sir Peter Parker, chairman of British Rail, who was also due to name a train after the university at a ceremony earlier in the day. But, although the engagements were set for a day when the trains were running, Sir Peter opted out because of the drivers' dispute.

He may, in any case, have thought better of his title for the lecture, "The Utopian View of Government and National Industry." He hopes to fulfil both engagements later in the year when in a more Utopian mood.

UGC could impose fines

The University Grants Committee may impose financial penalties, or other sanctions on universities which blatantly ignore their recommendations on individual subjects made last July.

It is understood the committee has expressed concern to a number of vice-chancellors and has discussed the possibility of penalties. Some members are particularly unhappy with Sir Alec Merrison, vice-chancellor of Bristol, who produced his own proposals, including the closure of the faculty of education (not mentioned by the UGC) and of Russian (specially protected by the (UGC), architecture (the UGC suggested discussions on co-operation with Bath) and history of art (the UGC suggested discontinuation).

In fact, in a ballot, Bristol's senators rejected proposals to close any departments, preferring across-the-board cuts and asked a committee of deans to come forward with new plans.

The deans' report, which goes to senate on Monday, rejects the consequences of the ballot and recommends the closure of architecture and a smaller faculty of education.

Vice-chancellors have generally been prepared to accept the UGC recommendations although some senates have been less reticent. At Sheffield, court passed a motion forbidding compulsory redundancy except by agreement with the unions and Aston senate has ruled it out for the time being. Leeds is following a general cuts policy. Hull has specifically protected some subjects but Bradford and Salford, overwhelmed by the enormity of the cuts, have had little room for manoeuvre.

At the University of Manchester Institute of Science and Technology council approved an academic plan involving cuts of nearly a quarter to some 20 departments. Council members were taken by coach to a secret hotel for the day-long meeting to avoid student demonstrators. At Manchester at senate meeting was postponed after a human wall of students prevented access.

Aberdeen University's planning committee document has made no suggestion that Italian be discontinued, which it was invited to consider, and Glasgow University has so far no plans to discontinue linguistics.

Faulty cement threatens cyclotron unit

by Robin McKie
Science Correspondent

The future of the Medical Research Council's cyclotron unit at Hammersmith Hospital is now in jeopardy because of structural faults which are threatening the future of the eight-storey building where it is housed. Unless major repairs are funded by the MRC, the unit may be closed, forcing the dispersal of an accomplished team of researchers.

Now the council is considering a special surveyor's report and is soon to decide whether the building should be repaired or closed. The unit's director, Mr Derek Vonberg, estimated that it could cost at least several hundreds of thousands of pounds to repair the faults – blamed on the use of high alumina cement which has been linked in the past with several other major construction defects, including problems with Birmingham is inner ring road. During a routine surveyor's inspection this traced to serious foundation cracking at the cyclotron building.

The building, constructed in the early 1950s, houses part of the Royal Postgraduate Medical School at Hammersmith as well as the unit and support facilities. The support facilities, without which the unit could not operate, were particularly threatened, said Mr Vonberg.

The cyclotron unit, a particle accelerator used to make radioisotopes for hospitals and to carry out cancer research, has established a strong reputation.

The THES

We regret that because of the present rail strike distribution of this, and recent, issues of *The THES* has ben delayed. We apologize to reader and advertisers for the inconvenience.

Polytechnic finances face up to a double blow

by Charlotte Barry

Polytechnics and colleges face further job losses and course closures as a result of next year's advanced further education pool allocation and the revision of this year's figures.

Governors and heads of colleges were this week holding urgent talks with local authorities in an attempt to soften the double blow.

At North East London Polytechnic governors were meeting today to discuss a proposal for contingency redundancies to offset a possible shortfall of £1.85m caused by a 11 per cent cut in next year's pool allocation. But Mr Gerry Fowler, the polytechnic director, stressed: "There is no possibility of compulsory redundancies in the near future."

Mr Fowler will be drawing up a major restructuring plan for the polytechnic in an attempt to avoid piecemeal cuts and arbitrary course closures.

One faculty and several courses could close at Birmingham Polytechnic which may lose £1m as a result of its four per cent cut in pool income for 1982/83.

Oxford Polytechnic, which is the lowest cost institution, faces a reduction of £600,000 next year. Under the new funding formula for the pool agreed by the Stephen Jones committee at the Department of Education and Science, Oxford should have received a budget increase but it was agreed all institutions should be cut by two per cent.

Some polytechnics also face reductions as a result of a recalculation of the pool allocation for 1981–82 using unit costs submitted by the local authorities for 1978–79 and 1979–80. At NELP, which will lose £1.1m, had agreed to find savings of £300,000.

Leicester Polytechnic, which faces a £500,000 cut in this year's budget only 11 weeks before the end of the financial year, is also to find ways of making last-minute savings.

A few polytechnics will gain from the recalculation. Coventry Polytechnic could receive up to £700,000 on top of the original allocation to make up for the £1.1m shortfall of the previous year which was covered by the city council. Similarly Kingston Polytechnic could receive up to £1m to offset the 18 per cent cut of two years ago.

Ealing College, which was one of the biggest losers in the distribution of next year's pool with a 13.7 per cent cut, is questioning its allocation. The local authority will consider an appeal to the DES and on Monday because the college claims that its student numbers have been underestimated by at least 19 per cent.

Root of the maths problem

by Patricia Santinelli

Far reaching changes to reduce the shortage of good maths teachers were recommended this week in the Cockcroft report. It wants to attract more high quality graduates and make initial teacher training courses more relevant to teaching.

The report is the outcome of a three year inquiry chaired by Dr Wilfrid H. Cockcroft, vice-chancellor of the New University of Ulster. It was set up to consider the teaching of maths especially that needed in further and higher education, employment and adult life.

The report says the present state of maths teaching in schools is extremely unsatisfactory and that it is currently being taught by an estimated 9,000 full-time teachers who have no qualification in the subject. It warns that without competent maths teachers no improvement in the standards of the subject can be achieved.

In its recommendations the report says that much greater effort should be made to attract maths graduates into teaching. It believes the Department of Education and Science could write directly to final-year undergraduates about opportunities in teaching.

Dr Cockcroft: call for changes.

Another possibility would be to introduce a system of flat-rate payment to graduates training to teach mathematics. Such payments would be conditional on the possession of suitable mathematical skills as well as signing an undertaking to enter the teaching profession and remain as a teacher for a specified time. Grants under similar conditions could be offered to fourth year students on BEd honours courses who were taking mathematics as a main subject.

The report also recommends measures be taken in the next few years to ensure that all newly trained maths teachers get posts. It believes local authorities could be subsidized by the department on a limited or temporary basis and that the cost of such a scheme would be small.

At initial teacher training level, the committee recommends that all intending maths teachers should undergo a training course. It wants the exemption given to maths graduates not to train to be removed as soon as possible, even if this leads to a short term fall in recruitment.

The committee believes that the long term solution to improving the standards of those trained for primary maths teaching via the Postgraduate Certificate of Education is to increase the length of the course. Its view is that places on PGCE courses should not be offered to students known to be mathematically weak.

The committee also opposes the recruitment on maths PGCE courses of students whose degree subject is unrelated to mathematics. It argues that no students should be admitted to either first or second courses in maths unless their degree courses contained a substantial mathematical component.

On the size of main courses in maths, the committee argues that the decision to continue these should not be taken on economical grounds but on educational ones. It believes that courses which regularly recruit only eight students should have their existence questioned.

It also wants an urgent review and evaluation of all courses providing for the initial training of those who will teach maths, particularly to ensure that training is relevant.

Another recommendation is that the practice of appointing Her Majesty's Inspectorate as official appraisers of initial teacher training courses in the public sector should now be instituted in universities, so as to remove a current anomaly.

Leader, back page

Everyday troubles summed up

by Charlotte Barry

Five out of 10 adults cannot read a railway timetable, a third cannot cope with percentages or read a graph and more than half do not understand the rate of inflation.

While nine out of ten can handle addition, only two thirds can do subtraction, multiplication or division, according to a report published this week by the Advisory Council for Adult and Continuing Education.

The inquiry, carried out in association with the Cockcroft committee, concludes that an overwhelming number of adults are inhibited about using mathematical skills. It blames teachers' dismissive attitudes, disrupted schooling, the seeming lack of relevance of the subject and pressure from over-anxious parents.

The advisory council's findings are based on two surveys. The first was by Mrs Brigid Sewell of Reading University, but the council was so alarmed by the results that it commissioned Gallup Polls to do 3,000 street interviews all over the country. The results proved to be similar.

The local survey concentrated on the mathematical skills needed and used by adults in everyday life. People were asked to do relatively straightforward calculations involving VAT, miles per gallon, wage rises, payment of rates, telephone charges and buying ingredients for recipes.

Questions were asked on the cost of buying eight 14 pence stamps, whether 300,000 was more than a quarter of a million, and how to calculate a 10 per cent tip on a £3.53 restaurant bill. Most people had difficulty with percentages, ratios, graphs and charts, timetables, metric units.

Adults' mathematical ability and performance, price £1.50, available from ACACE, 19B De Montfort Street, Leicester LE1 7GE.

Job rationing proposed

by Ngaio Crequer

A Leeds University lecturer has withdrawn his application for premature retirement and instead proposed that his job is divided into two and he will retire from half.

Dr Ulin Place, aged 57, a senior lecturer in philosophy, has also put forward detailed plans for job-sharing and job-rationing, based on half-time employment, to meet current unemployment problems.

He has asked the university registrar to treat his full-time contract as two half-time contracts, each preserving full pension rights. He would then apply for early retirement under one of the contracts.

In his application, he says such a precedent would be very much in the university's interest as premature semi-retirement would be likely to attract more than two applicants for every one interested in existing schemes. Even if compulsory redundancies were necessary, "two compulsory semi-retirements would be far more acceptable to everyone concerned than one staff member made completely redundant."

His job-sharing scheme would also ensure "a half-time job for every man and woman over the school leaving age who wishes to work, disabled as well as able-bodied, and above as well as below the pensionable age."

Under his scheme, only those with non-working dependents would be entitled as of right to either full-time employment, or benefit to make up the difference between half and full-time salary.

The half-time salary should be appreciably above unemployed benefit payable to a single person. Full-time vacancies should be advertised as two half-time vacancies. There should be inducements for people to reduce their full-time contracts.

Students from the Royal College of Art and Martin's School of Art have been appearing at some of London's most fashionable venues in flamboyant dress is the work of singer Jo Lewis and saxophone Polytechnic's textiles and fashions degree.

Britain slips down the research league

Britain has slipped significantly down the world research league tables during the last 10 years, and current and planned cuts could further undermine the level of British output.

According to research just carried out by a team sponsored by the French government, based on a content analysis of 286 current scientific journals, Britain led France, West Germany and Japan in research output in 1970.

At the start of the 1970s Britain was responsible for 10 per cent of papers in mathematics, 10.2 in physics, 16.2 in chemistry, 16 in biological sciences, and 10.4 in earth and cosmic sciences, according to figures quoted in *Le Monde*.

By 1980 all three countries had improved their share in most fields, but the UK share fell to 6.9 per cent in mathematics, 6.7 in physics, 10.5 in chemistry, 9.3 in earth and cosmic sciences, and 12 in biology. America heads the table with about half the total output.

Professor Eric Hobsbawm, professor of economic and social history at Birkbeck College, London, said the figures clearly showed the relative lack of expansion in research in Britain in recent years. "This is hardly the moment to start cutting down on research and institutions promoting research," he said, referring to current Government policies.

A "core" of highly trained senior research workers should be maintained in Britain to ensure the continuity of research projects and to give guidance to new young researchers, according to the Royal Economic Society.

In evidence submitted to a study of researchers and their career prospects being carried out by a team at Goldsmith's College, London, the society says major problems arise in trying to keep senior researchers in secure posts.

The society says the best way of ensuring continuity is to establish a core of secure posts for those who wish to remain in research. Uncertainty about the next grant and the renewal of contracts for researchers is a major problem, it says.

It urges the Social Science Research Council to give serious consideration to extending the system of handing out annual sums to research units of proven ability.

Animal care report left on the shelf

by Robin McKie
Science Correspondent

A report urging the setting up of courses for science undergraduates to learn proper animal care has remained unpublished for the past two years, it was revealed this week.

Dr Jenny Remfry, of the Universities Federation for Animal Welfare, told a meeting on Experiments on Living Animals, organized by the British Association for the Advancement of Science in London, that Britain's universities were falling badly behind in instruction in animal handling compared with the pharmaceutical industry's in-house training programmes and also with other countries.

This was occurring because biological and physiological teaching has involved less direct use of animals in the past few years and also because supervisors had less time to spend on training in animal care.

The problem was not corrected by the time the students were carrying out postgraduate research which meant their skills in handling animals were limited by the time they became university lecturers. This affected not just the animals' welfare, but also how the academics carried out proper research. Anaesthetics and surgery, for instance, were highly-skilled practices that required a full understanding of animals and how they behaved.

A working party into the teaching of animal care had been set up by the Medical Research Council's Laboratory Animal Centre, and had produced a report recommending various improvements for new researchers and for established scientists particularly with regard to ethical legislation, handling, anaesthesia and experimental practices.

The group proposed that courses be established throughout the country at various centres, in particular older universities, and in various concentrations. At least ten such courses would be needed for the London area, fewer for the North-West and the Midlands and few still for the North-East and Scotland.

However, said Dr Remfry, since the working party reported two years ago nothing had been done by the Laboratory Animal Centre to publish the report or their conclusions.

In his address to the meeting Sir William Paton, professor of pharmacology at Oxford University said the worth of carrying out experiments on animals had to be seen in a historical context. Had we not carried out experiments on animals over the past centuries our understanding of physiology would be back in the time of the Ancient Greeks.

However, his views were challenged by Dr Robert Sharp, of the National Anti-Vivisection Society. He believed animal welfare was a moral question and he suggested that many animal tests lacked validity.

For instance the controversial "LD1 dose 50" – which was used to find the amount of a drug required to kill 50 per cent of a group of animals – was not particularly useful when considering cases of human toxicology and could be substituted by simple cell culture tests.

Contracts face test

Union officials anxious at the growing use of fixed term contracts for lecturers face a major test this week.

Birmingham councillors and education officials are to decide whether to renew the contracts of five technical college lecturers when they expire at the end of March.

The five, all at the Matthew Boulton technical college, have been employed on a series of one year contracts since they were appointed to run courses for the young unemployed in 1979.

Now the authority is threatening not to issue new contracts to the five – and union officials fear that another 22 contracts expiring in the summer may also be terminated.

More than 45 of Birmingham's full time college lecturers are on fixed term contracts – about 5 per cent of the total.

The National Association of Teachers in Further and Higher Education is threatening to take industrial action at affected colleges if the contracts are not renewed and no alternative work or training is found.

Secretary Mr Paul Mackney said: "The local education committee claims that the fixed term contracts are necessary because the money is provided by another Government department."

Senior Natfhe officials have warned that authorities would make greater use of fixed term contracts, and regard the insecurity of staff at a time of cuts as a major reason for resisting them.

Hatfield shortlist narrowed to three

Two university science professors are among three applicants on the final shortlist for the post of director at Hatfield Polytechnic. They were being interviewed today for the post which falls vacant at Easter when Sir Norman Lindop becomes head of the School of Osteopathy.

On the shortlist are Professor Peter Jarratt, professor of computing and director of the centre for computing and computer science at Birmingham University; Professor Alan Rogers, vice principal at Hertfordshire University and professor of pharmacy there since 1966; and Dr John Ilston, deputy director at Hatfield and former dean of engineering.

Fees ballot

Oxford University has narrowly rejected proposals that examiners and graduate supervisors should no longer be paid fees, to help cut costs. Congregation, representing all dons, voted 511 to 493 against, in a postal ballot. A proposal that the honorary school of agriculture and forestry fees should be closed was accepted by 625 to 139.

Cancer warning

The college lecturers' union has warned its members against the dangers of handling formaldehyde, a suspected carcinogen. The National Association of Teachers in Further and Higher Education says contact with the chemical should be eliminated and substitutes sought.

Initials unravelled

A handlist of 850 acronyms and initials used in education has been published by the Librarians of Institutes and Schools of Education. *Acronyms and Initialisms in Education*, is being sold at £1.50 for the first copy and 60p for additional copies and is available from the association's treasurer, Mr Michael Argles, at Lancaster University Library.

Low pay boost

A pay claim favouring lower paid university white collar workers has been drawn up by Naigo's negotiators. They are to seek a rise in line with the TUC model claim for the public sector to cover inflation, but half would be paid as a lump sum and the rest as a percentage.

Early retirers offered new jobs for old

by Olga Wojtas
Scottish Correspondent

Forty out of 70 academics taking premature retirement at Strathclyde University are to be re-employed for up to four years and could earn nearly 90 per cent of their present salaries.

Those re-employed will work a maximum of a third of their full-time hours and will negotiate contracts individually. But, with enhanced years of service and investment of lump sums of compensation, it has been estimated that they could recoup 80 to 90 per cent of salaries.

The scheme allows staff over 50 a lump sum of one and a half times their salary and an index linked pension of up to half their salary, depending on the number of years of service which could be enhanced by up to ten years.

A professor could therefore expect re-employment at £6,000 with a lump sum of £27,000. At least two professors have decided to take early retirement and return in an honorary capacity.

Strathclyde's scheme has been building up since the beginning of last year, hence the offer of four years re-employment instead of the three years established by the University Grants Committee in their November guidelines. The university's bursar, Mr Louis McGougan, said: "We could not renege on our former offer to staff, but we have advised them that from February 28, we will revert to the UGC guidelines."

Thirty more academics are expected to opt for the scheme, but will not leave in the present academic year. Strathclyde has already reached its target with academic posts cut by 70 to 650 this year, falling to 600 by 1983/84.

Dr David Jago, president of Strathclyde's AUT, said that while the fear of compulsory redundancy was diminishing, "the Government's policy of forcing a reduction in the number of staff means that those who would be able to make a continuing contribution are being prevented from doing so and those remaining will have a marked deterioration in their working conditions, with opportunities for research likely to be reduced because of an increased working load."

London's engineering schools face merger despite increase

by Robin McKie
Science Correspondent

Engineering schools at London University face crippling limitations of staff, equipment and space – despite being earmarked for slight increases in student numbers by both its court and the University Grants Committee.

In its report, the subject area review committee on engineering, set up by the university, urges short-term measures to prevent this. They could lead to the amalgamation of the city's engineering schools into three larger units within five years.

The committee, chaired by Sir Robert Clayton, technical director of GEC, says that despite recommendations for student increases, engineering schools were receiving cuts like those suffered by other departments. Also because engineering offers more financially lucrative posts outside universities, there was a high turnover of places – which meant the freezing of posts was most rapidly affecting their departments.

This trend must be halted "unless engineering is to be increasingly debilitated", states the report. The discipline's special position must be recognized and key posts filled.

Some areas, such as electrical and electronic engineering, are supported by obsolete laboratory equipment with insufficient replacement funds available. The committee recommends the court sets aside equipment funds for engineering.

More accommodation must be found for teaching of new four-year courses in engineering and mergers between schools must take place. A plan put forward by the chairman to merge five schools into three larger ones is being studied by the committee.

A separate report by the subject area review committee on life sciences urges that cuts in home student numbers for the discipline should be limited to 300 over the next two years – 100 less than the cut urged by the court and UGC. It also rejects the idea of an increase at Imperial College.

In the long term, mergers or fusions of departments should be discussed with the aim of increasing student-staff ratios and each college should consider combining separate departments into single schools of life sciences.

● Sir Bruce Williams, director of the Technical Change Centre, and former vice chancellor of Sydney University, is to replace Sir Alec Cairncross as chairman of London University's social studies subject area review committee. Professor David Smith, of the department of agricultural sciences at Oxford is to succeed Sir James Beament as chairman of the biological sciences committee.

ILEA chief gets top post on new body

by John O'Leary

Perhaps the most crucial position in the new Committee for Local Authority Higher Education has gone to Mr John Bevan, of the Inner London Education Authority, thus depriving ILEA of its second top official in a week.

Mr Bevan will leave his post as chief education officer of ILEA at the end of April to become secretary to the new national body, its first and most senior full-time appointment. In doing so, he will sacrifice the opportunity to succeed Mr Peter Newsam in the best paid and most prestigious job of its kind and take a cut in salary.

He said this week that financial arrangements were not a prime consideration in taking the job, which he considered to be of the utmost importance. The appointment was made without guarantee of tenure beyond three years.

Mr Bevan, who is 46, has been at the ILEA since 1973, having been a senior lecturer in physics at South Bank Polytechnic and a health physicist at the Atomic Energy Authority. He was educated at Jesus College, Oxford and St Bartholomew's Hospital Medical College, London.

As the senior official responsible for further and higher education in Inner London, Mr Bevan has acquired a reputation as a leading authority on the pooling system, which will be among the new body's principal concerns. He was a member of the Stephen Jones group, which devised the new funding system for polytechnics and colleges, and a long-standing member of the Pooling Committee.

Mr John Bevan: salary cut.

Mr Bevan will be secretary to both the main committee and the second tier National Advisory Board, which is to be launched on Monday at the Royal Festival Hall, London. He has already held "a long working meeting" with Mr Christopher Ball, who is to chair the board.

There has yet to be a decision on the size of the secretariat, but Mr Bevan said that the volume of work would require more than six staff. "I want to attract one or two good people from what I would broadly call the institutional or academic world," he said.

He added that, although no one could pretend that the new machinery was perfect, he was convinced that it could be made to work with the cooperation of all sides in public sector higher education.

The appointment was made in controversial circumstances, the Committee of Directors of Polytechnics having protested at the absence of national advertising for the post. Mr Bevan was chosen from an original field of six local authority education officials.

Bradford head opts out

Mr Eric Robinson, principal of Bradford College, who is at the centre of a row over the proposed merger of Bradford and Ilkley Colleges, has not applied for the job of principal of the new institution. By the closing date for applications, January 25, some 30 applications for the headship of the new college which opens in September had been received.

Mr Gordon Moore, chief executive of Bradford Council, said Mr Robinson had not applied.

Mr Robinson's decision is the culmination of a row over allegations of prejudice on the first working party set up by the authority to examine the future of higher and further education in the district, and of which Mr Robinson was a member.

However a second working party chaired by Mr Moore confirmed the recommendation that the two colleges should merge.

The authority then ignored Department of Education and Science advice by advertising the post nationally before deciding on the composition of an ad hoc appointment committee. This would have had the power to decide how the post should be advertised.

This move by the authority reinforced fears that there was a "vendetta" against the principal, and many feared he would not apply.

The composition of the committee has been settled. It will have four Labour councillors and two Conservative ones, the chairman of the colleges' governing bodies and one staff governor. There are also to be trade union observers and three officers of the council.

But another dispute between Natfhe and the authority over the grading of the new institution is not resolved. The Natfhe joint committee of Bradford and Ilkley colleges says the grading of 10 should be 12.

Primary PGCE to double?

A plan to ask ten to 12 universities to double their primary Postgraduate Certificate of Education intakes by 1987 is being considered.

The Department of Education and Science forecasts that even a 100 per cent increase in the number of newly trained primary teachers will not meet projected demand by 1990 when it will have risen from 4,600 to 10,000.

In a paper to the Advisory Committee for the Supply and Education of Teachers subcommittee last week the DES said it might be possible to increase the universities's current primary training target in both BEd and PGCE from 574 to 1,200.

St Andrews' axe falls

St Andrews University court accepted a recommendation to axe 50 academic and 70 non academic posts over the next two years this week but ruled out the possibility of redundancies before October 1983.

The court passed most of its restructuring committee's plan, including the proposal that the linguistics and archeology departments close next October. One post is saved, that of a music lecturer, because the committee's proposal to cut the honours music course by reducing the staff of three lecturers to one was rejected.

The committee had also recommended the closure of the marine biology department, but the court decided that although it will cease to exist as a separate department, teaching will continue. A similar decision has been made on the future of the theoretical physics department, and it seems likely that physical education will be retained as an honours option within a biological science degree.

Around 50 academics are to take early retirement at Dundee University and "a high proportion" of them will be re-employed at a maximum of 40 per cent of their salary.

Rothschild review opens for business

by Paul Flather

Lord Rothschild's review of the Social Science Research Council opens for business next week with a clear commitment not to be bound by its official terms of reference.

Already some 200 letters have gone out inviting social scientists to prepare submissions or appear as witnesses for the review, by the end of February.

The letters ask for comments on the Government's three terms of reference, and other matters affecting the SSRC "which anyone making such an inquiry should take into consideration".

Sir Keith Joseph, Secretary of State for Education, invited Lord Rothschild to inquire into what areas of SSRC work should be done at the customer's expense rather than the taxpayer's; which areas could be done as well and as cheaply by other bodies; and which new areas of Government research could be done better by the SSRC.

SSRC members dicussed the review and their likely strategy last week. They are likely to meet Lord Rothschild formally in mid-February, and Mr Michael Posner, SSRC chairman, is drafting a council submission.

Lord Rothschild is known to favour short "*Daily Mirror* editorial"-style submissions, and is not too keen to rehearse recent arguments over the proposed restructuring of SSRC committees. But he is well aware of the controversy surrounding the reforms.

Chairmen of the six new committees, which start work in the summer, and SSRC staff met last week in Stevenage to discuss outstanding issues on the new structure.

● Professor Ralf Dahrendorf, director of the London School of Economics has criticized the "philistines" who would want to impose a disproportionate cut in social sciences expenditure.

In the school's annual report, under a section, "The social sciences under pressure" he says that the time may have come to answer some of the doubts and suspicions about the social sciences. They are a collection of disparate disciplines, all of which have a common concern with people and the human environment, he says.

Lecturers' rights threatened

Surrey University is proposing to amend its statutes to enable it to make tenured lecturers compulsorily redundant and remove their legal rights to claim damages for breach of contract.

The university has engaged parliamentary agents to draw up a suggested draft ordinance which would specify redundancy as good cause for dismissal.

Senate has been told the Privy Council permission for such a change would be likely to be forthcoming, and that the matter could be completed by August. The university has said that reduced funding means staffing will have to be reduced by 150, including 50 tenured lecturers.

Legal opinion given by Mr Robin Auld, QC and his junior, for the university, holds that under existing statutes departments can legally be closed but staff cannot be lawfully dismissed for redundancy. However they have advised that this could be got round by amending the statutes, even though this would have a retroactive effect.

The Association of University Teachers however has challenged this view of law. Advice obtained from Lord Wedderburn, who has given a detailed opinion on the charter, contracts and rules of employment maintains that present employment contracts at Surrey would hold up despite a change in legislation.

At a meeting of the Academic Assembly a motion resolutely opposing any change to the charter and statutes intended to weaken existing tenure of academic staff, was passed unanimously.

Mr Michael Smithurst, who seconded the motion, told the meeting that it looked as though Surrey might be trying to do its own equivalent of retrospective legislation to extinguish contracts.

The change in statute would seek to allow dismissal for redundancy provided there were fair compensation terms. At Surrey any change would require a simple senate majority, a three-quarters majority in two consecutive meetings of council and Privy Council permission.

Redundancy

continued from front page

the universities have been unenthusiastic about discussing a national redundancy deal for fear of encouraging the thing they most want to avoid – an easy way to axe jobs. More than 4,000 are due to disappear over the next two years.

But this week, NUPE national office Mr Harold Wild, who is taking over as secretary to the employers' side of the national negotiating machinery, wrote to his opposite number, Mr Ronald Hayward, demanding that ancillary staff should not be treated less favourably than dons.

A major complication is that the demarcation lines between academic-related administrators who will qualify for the improved scheme and Naigo members doing the same job, who will not, are blurred.

The initiative to improve redundancy compensation in the public sector remains with the local authority employers who are unwilling to treat teaching staff differently from other local government employees. While prolonged negotiations with union officials have produced new proposals for avoidance and notification of redundancy, the compensation question remains open.

Local authorities have the discretion to top up pensions of people leaving the service at 55 or more, but this pool has been almost entirely drained over the past two years. Although a modified redundancy scheme is in operation for the public sector, it rarely leads to payments of more than £2,000.

Local authority officials have been discussing improvements among themselves and with Department of Education officials but only hypothetically.

Cost of compensation, page 9
Leader, back page

Fringe journals fight for survival

by Paul Flather

The recession is forcing many important independent journals on the fringe of academe to make difficult decisions to ensure survival through the 1980s.

Many journals are having to chase new readers, increase subscription rates often kept artificially low as a service to readers, and even to review their traditional use of unpaid, voluntary labour.

Inflation appears to the biggest enemy of journals like *The Radical Science Journal*, *History Workshop* and *Radical Philosophy*, forcing up print bills, postage, and other costs. But cuts and the recession have also shrunk the pool of research students and younger academics who form an important section of the readership of such journals.

The *Radical Science Journal* began life in 1972 and now has a print run of about 2,500, a subscription list of about 700, and costs £2. Its already has an institutional subscription rate, between two and three times its rate for individuals.

Dr Bob Young, one of the collective, said there was little doubt the climate was affecting sales. "Being a radical scientist is extremely hard these days. There is a big squeeze on and people are having to struggle and worry about their jobs first, and generally toe the line."

"When we started out, public transport was cheap, it was easy to hitch, telephone bills were much lower. All these things have been nibbled away. Now people cannot afford to turn up for meetings and continue to exploit themselves for the magazine."

It now costs up to £3,000 to print one issue of the magazine leaving a shortfall of up to £1,000 an issue. The collective is planning to inject some of its own money into the magazine, launch a drive for new readers, take out a bridging loan between printing and collecting sales revenue, and for the first time pay a collective member for work.

"All this goes against the grain for us, but in the current climate I think we have to consider paying someone part-time for publicity and production work," added Dr Young.

The society for the study of *Labour History*, which produces a regular bulletin, has responded by doubling its subscription, for years kept artificially low to help its large trade union and adult readership, to between £7 and £8 a year. It aims to cover the costs of its 2,000 print run by sales revenue.

Radical Philosophy, approaching its tenth anniversary, has just come through a rough patch, but keeps its prices down below £1 by using cheap printing techniques and unpaid help.

Dr Noel Parker, secretary of the collective, who works at the Open University, notes the real problem is organizational. "Our collective is growing older and older. We sometimes face a crisis of organization, say if we lost our subscription list. But I am sure we have built up a strong viable role for ourselves."

History Workshop, launched in 1976 on a £5 subscription rate, has reluctantly decided to increase its rates to £10 from April, and charge institutions £15. Projections by the collective revealed a £10,000 shortfall was looming on its range of activities unless steps were taken to bring in more revenue.

The journal reports a growing base of supporters, and a great deal of energy is being put into raising funds and recruiting new readers.

Feminist Review, run by a collective of 19 women, has just raised its subscription from £4.50 to £6 for three issues a year, and launched a drive for £10,000 to fund a London office and a paid worker. Already the workload on collective members is increasing.

Fewer appear to be going way of *Ideology and Consciousness*, which closed recently.

Letters, page 27

Students vent anger at cuts

Signs of increasing student discontent and frustration at Government policies leading to cuts in education services increased this week.

In what appears to be a rehearsal for the major week of action against the Government's intention to hold grant increases for 1982-83 back to 4 per cent, there were demonstrations, occupations and continued rent strikes in many parts of the country.

By Wednesday students at Sheffield Polytechnic were in the sixth day of an occupation initiated by members of the Socialist Workers' Students Association. The action began on Friday after a mass meeting addressed by National Union of Mineworkers president-elect Mr Arthur Scargill and extended to the polytechnic's key buildings over the weekend.

"Mr Scargill's speech could not be construed as a direct call to occupy," union president Mr Mark Hatton said. "He simply said there was room for students to work constructively with the trade unions, and gave the Jobs Express and Educational Alliance as examples."

But there were signs of growing opposition to the occupation from students who had not attended Friday's meeting, and its continuation was being kept under constant review.

There were other, briefer occupations at Manchester University and the Institute of Science and Technology. A major demonstration is planned for Bradford tomorrow, and today Social Democratic Party MP Mr Tom McNally and Conservative Mr Keith Hampson are among the speakers in a debate in Leeds.

In Wales there was a demonstration in Bangor on Tuesday coupled with strikes at Llandrillo Technical College and Bangor Normal College.

Up to nine universities, polytechnics and colleges are on rent strikes in protest at the escalation in hall fees, including University College Cardiff, Kent and Sussex universities, and Manchester, Sheffield and Bristol polytechnics. The National Union of Students is in general support of rent strikes, according to a spokesman. "We do not believe students can afford to pay 20 per cent increases," he added.

NUS privately has some sympathy for college authorities trapped between increasing costs and Government restriction on spending.

The major week of protest begins on March 1. The National and Local Government Officers' Association has pledged the support and cooperation of its members in universities and colleges for the students' action.

Cash for computer

The Science and Engineering Research Council, which is currently underspent by £610,000 this financial year, has decided to apply to the Department of Education and Science for permission to use the cash as the first instalment towards a new £1.9m 3081D computer for the Rutherford and Appleton laboratory.

CNAA suggests itself as the possible national body

by John O'Leary

A permanent national body to oversee public sector higher education should be created along the lines recommended by the Department of Education and Science but without discriminating between types of institutions or removing them from local authority ownership.

This is the basis of a new proposal, termed Model C, by the Council for National Academic Awards. The CNAA response to last summer's Green Paper rejects both the DES and local authority models but does not rule out the possibility of itself developing into a national body with responsibility for planning and resource allocation.

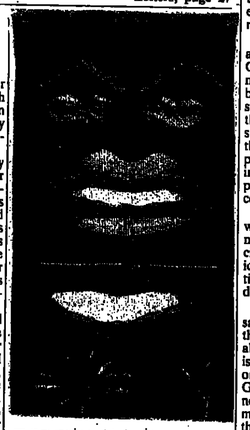
Quoting Australia as an example of a unified funding, planning and validation system, the council identifies four advantages of recasting its own functions. Although it recognizes that such a solution would also present a number of difficulties the submission places on record willingness to discuss these or other more radical arrangements.

Its recommendation, however, is for a compromise between the two proposals included in the Green Paper. As they stand, the CNAA believes, Model A is "seriously deficient because it lacks credibility not only on academic but also on other grounds" and Model B, though attractive, "suffers from certain weaknesses stemming principally from the need to make divisions between institutions."

The council would prefer a body which encompassed all public sector higher education using a mixed system of funding. Those institutions doing mainly advanced work would be funded on a programme basis while those with only small amounts would receive support on a course basis. Because of the large number of colleges involved, regional groups could be formed to allow manageable national negotiations.

Under this system, grants would be made by the Secretary of State either direct to institutions or through earmarked grants to local authorities. The national body, would be accountable through the Secretary of State, to Parliament but would also be required to make known its criteria and reasons for decisions.

The council envisages its role as the "academic arm" of any national body and would wish to be represented on the body itself. In order to ensure compatability on both sides of the binary line, it also suggests strong links between the CNAA and University Grants Committee membership structures.



Smile Please, by John Brennan, is among 70 pieces in an exhibition of contemporary British tapestry mounted by the Sainsbury Centre for the Visual Arts, at the University of East Anglia. The exhibition is at Edinburgh University's Talbot Rice Art Centre until next Friday.

Incentives to sell property

by Ngaio Crequer

Universities which sell land or buildings because of the cuts will be allowed to keep up to £100,000 from the proceeds of the sale, under changes announced by the Government last week.

But the money will have to be used within two years of the sale for building or adaption work made necessary because of the contraction in student numbers.

Until now universities have had no incentive to sell property because, except in a small number of cases, the money would have reverted to the Treasury.

A growing number of universities have already set up small committees to examine how best to dispose of excess property and this change in regulations will increase the trend.

Sir Keith Joseph, education secretary, said in a written reply in the Commons last Thursday: "Over the next few years most universities will be experiencing some reduction in student numbers or some change in the distribution of students between subjects. Some greater flexibility in the rules about the surrender of the proceeds of the sale of land or buildings acquired with assistance from public funds may help in this process."

He said the new arrangements would encourage universities to make the most economic and efficient use of accommodation, and to identify property not fully or effectively used that might be surrendered.

The new rules specify that, for sales of sites or properties of less than £100,000, the university will be able to keep the money provided it is used within two years for building or adaption work. The University Grants Committee will have to be notified of any sale and told how the money will be used. Money not used this way will revert to the Treasury.

If a site or building is sold for more than £100,000, either the balance above that sum will have to be surrendered, or half the proceeds of the sale (where this is greater than £100,000) can be used for adaptation or buying new property so long as this takes place within three years. But the purpose will have to be approved by the UGC.

Third World for fourth channel

Learned societies, research institutes and adult education bodies are among more than 60 organizations involved in the International Broadcasting Trust launched this week.

The trust, formerly the Fourth Channel Development Education Group, aims to provide informal adult education programmes for Channel Four on issues of Third World development.

The £500,000 scheme to make 22 half-hour programmes in the first year will be backed by printed materials. At the same time local branches of the trust will plan coordinated educational activities ranging from formal courses to discussion groups and home study packs.

Members of the trust represent educational bodies, church groups, trade unions, race minority groups and development agencies and charities. They include the Royal Anthropological Institute, the Sussex development education group at the Institute for Development Studies, the Workers' Educational Association, London University's centre for multicultural education, and the Trade Union Education and Research Unit.

Its main aims are to widen understanding of the needs, problems and cultures of developing countries, consider their links with industrialized nations and show the interdependence between them. It will also provide the voluntary adult education sector with an opportunity to make greater use of television.

Cold cure just a few sneezes away

A cure for the common cold, the goal of medical researchers for centuries, is only a few tantalizing months away, scientists believe. The only problem is a lack of people available to catch colds!

This bizarre difficulty is affecting work at the Medical Research Council's common cold unit at Harvard Hospital, Salisbury, and occurs amid one of the worst winters ever recorded. In fact it is a perennial problem, according to administrator, Dr John Wallace.

"We have plenty of volunteers during summer. However, in winter many have to cancel at the last moment because they have already caught colds and that is no good to our research," he said.

Ten years ago, reasearchers at the unit had established that nasal sprays of interferon and proved effective in preventing volunteers from catching colds caused by rhinovirus agents. This research was abandoned because supplies of interferon were then very limited.

Now genetic engineering has allowed scientists to develop bacteria which can produce human interferon in laboratories and the unit has already obtained enough to start trials again.

"If we can find about 200 people to come to the unit then I think within the next six months we will be able to say quite definitely if interferon is capable of preventing all forms of the cold", said Dr Wallace.

Only one in three volunteers can expect to catch a cold while at the unit. Natural immunity, and perhaps interferon, should save the others.

As for discomfort, Dr Wallace pointed out that during their ten days' stay, the volunteers would be isolated in comfortable centrally heated flats, provided with three cooked meals a day, given £1.60 a day pocket money and be provided with free rail transport to and from Salisbury.

The conditions are ideal for study and the MRC claims that many students who volunteered have attributed exam success to a period of intensive work at the unit!

Dictionary hits money difficulties

The planned completion date of the massive *Dictionary of the Older Scottish Tongue* has been jeopardized by the decision of the universities funding the project not to replace its two senior editors, who are due to retire in the next few years.

Edinburgh, Aberdeen, Glasgow, St Andrew's, Dundee and Stirling universities, who contribute around 65 per cent of the cost, warned they intended to remove all financial support in 1988. However, after discussions with the Scottish Dictionaries Joint Council, which supervises *DOST*, they agreed to continue a reduced financial contribution by freezing the editors' posts, leaving only one junior editor.

The dictionary, which covers Scots' words to the eighteenth century, is considered of prime importance by historians, linguists and literary scholars.

The joint council's chairman, Professor Angus McIntosh, said: "There was a danger the whole project would fold up, but now it can tick over indefinitely."

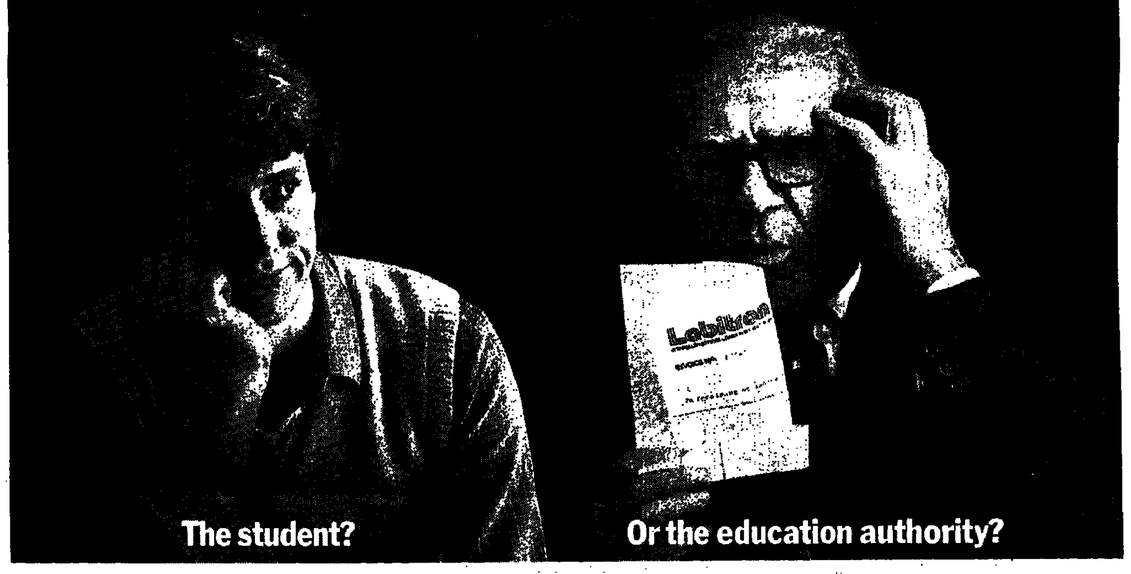
The dictionary has been published up to the letter F and will have been edited beyond R by the end of 1982. However if no funding is found, there is no possibility that the project, which began in 1915, will be completed by the end of the century.

The Conference of Scottish Medieval Historical Research has written to Professor McIntosh assuring him of its encouragement in any attempt to win a less severe reduction from the universities.

But Dr Jenny Wormald, of Glasgow University's Scottish History Department, and the conference's secretary, said they were not attacking the universities for their decision. Similar projects in other countries were funded nationally.

The dictionary also has difficulties. The volumes which have appeared were published by the University of Chicago, which dropped the project last March, and *DOST* is seeking a new publisher.

Who pays when your language lab breaks down?



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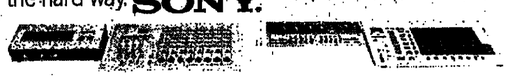

To: Keith Smith, Sony Education Systems, Pyrene House, Sunbury Cross, Sunbury on Thames, Middlesex.

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Catholic college fears future

by Patricia Santinelli

Governors of St Mary College, Fenham, are seeking a meeting with the Department of Education and Science over a new funding system for voluntary colleges which they say threatens its future.

The governors have told the DES that the scheme which means less money for each college and a likely reduction in student intake will create serious financial difficulties.

They want to open discussions with the department about safeguarding the interests of the Catholic college and its staff and students over the next three years. Under the scheme whose introduction has been postponed until 1983, colleges will compete for scarce resources. Their grant will no longer be based on staff-student estimates but on the amount of total funding available.

Colleges are asked to submit three financial estimates, one basic and two supplementary. Those who work receives DES approval will, in effect, "rob" others of available resources.

As a preliminary colleges have been advised that for 1982/83 they will have to submit estimates amounting to at the most 98 per cent of planned expenditure in 1981/82 and 91 per cent for 1983/84.

Sister Margaret Nourse, the principal of St Mary's says the figures will make life extremely difficult for such a small establishment. "Basically we wanted to alert the department as soon as possible to the effect of this financial squeeze on the college's work and student intake, and point out to them that there is a level of cuts with which we cannot cope" she said.

St Mary's has a capacity for 300 students but is known to have been under recruiting, although its in-service teacher training work is thriving. Like many institutions it was badly affected by low BEd recruitment – it has 26 on its course – and by cuts in postgraduate intakes which have reduced its quota from 40 to 36.

"We had hoped to have more people on our BEd, because our ... professional degree is very popular with students, but we are limited ... last year's intake. Although our PGCE cuts are low their effect ... greater on such a small institution," she said.

There are fears that if no solution is found, it may be the first institution to crumble. Its work might then be taken over by Newcastle Polytechnic with which the college has been in academic association for some time.

● The Weymouth site of the Dorset Institute of Higher Education has been recommended for closure by the county education authority because of continuing low recruitment on the BEd course which takes the majority of places there. A final decision will be taken next month by Dorset County Council.

The campus, formerly Weymouth College of Education, may be bought by the police for a training centre while courses are transferred to the institute's main site at Bournemouth.

Dentist keeps appointment

Professor Edward Marsland, temporary vice chancellor of Birmingham University, has been appointed permanently and will now serve until 1986. The council also approved the principle that future vice chancellors should be appointed for a fixed term.

Professor Marsland, aged 58, is professor of oral pathology in the dental school and was head of the department until his appointment as vice-principal in 1979. Before that he was director of the dental school.

He was born and educated in Birmingham and graduated from the university's dental school with first class honours. He has been confined to a wheelchair since an attack of polio at the age of 24. He is well known in the West Midlands for his work for disabled people.

Evening class fees rise by a quarter

by Charlotte Barry

Fees for adult education classes have risen by almost a quarter in the last year, according to the National Institute for Adult Education.

A survey based on 100 local education authorities show that nine out of ten increased their fees, but the cost of non-vocational classes ranged widely from 21 pence to 95 pence an hour.

The average fee was 51 pence an hour – about £10 for a two-hour course held once a week for ten weeks – compared to 41 pence last year. Examination course fees remained cheaper at an average 33 pence an hour for O levels in a 16 pence to 66 pence range, and 30 pence an hour for A level courses.

Most authorities reduced their fees for pensioners, 12 per cent charged them nothing at all, but a tiny proportion expected elderly people to pay the full cost. Unemployed people could study free in 25 local authorities and pay reduced fees in two out of three. About ten authorities charged them the full amount for non-vocational classes.

More than three quarters of authorities were reluctant to reduce fees for second and subsequent courses, but nine offered discounts and eight offered credit card facilities on all classes.

Enrolments appeared to be slightly down on last year, when they fell 11 per cent below the 1979 level and hit the lowest point for a decade. The institute is reluctant to draw precise conclusions this year because only half the authorities submitted figures which varied wildly between areas.

Fewer foreigners using UCCA

Applications from overseas students for university places for 1982 entry were down by nearly a quarter at the closing date.

By December 15 last year, 11,410 students from overseas had applied, compared with 14,804 the same time the previous year, a fall of 23 per cent.

There was a 6 per cent increase in applications from home students, from 138,795 in 1980 to 147,242 in 1981. Taken together, the figures show a 3 per cent increase in applications.

The Universities Central Council on Admissions, which provides the figures, will continue to process late applications. It says people have been applying earlier than usual, probably because there are fewer available places. Normally late applications constitute 10 per cent of the total.

There have been substantial increases in applications in biology, biochemistry, mathematics (excluding computing), physics, chemistry, geology, combined biological/physical sciences, geography, accountancy, sociology, combined social studies with arts, combined and general arts, history, art and design.

Cambridge debates changes

by Paul Flather

Cambridge colleges are bracing themselves for a lively debate on changing the date of their special entrance examination so that candidates all take it at the same time in the term before A levels.

The committee of college representatives was meeting in Cambridge today to discuss whether the examination dates should be shifted from the autumn term back to the spring term.

Supporters of the move hope this will eliminate the difficulties increasingly faced by the colleges when trying to compare the results of candidates taking the entrance early in their fourth term of the sixth form with those taking the exam in their seventh term.

In recent years students, particularly from maintained schools which do not offer special Oxbridge coaching or have facilities to run seventh-term courses, have been encouraged to take the entrance exam early.

Fewer than half the students admitted to Cambridge last October came from maintained schools; there were 1,286 students from maintained schools, and 1,417 from independent or direct schools.

While the fourth-term entrance has been widely welcomed by state schools, it has made it difficult for colleges to make clear decisions about which candidates are the best. Changing the date would make comparisons much easier.

However there are likely to be two major obstacles. Teachers are certain to object to the extra burden placed on all pupils in the middle of their preparations for A level.

And other universities are likely to object. A current agreement organized through the Universities Central Council on Admissions keeps other universities happy for Oxbridge to hold separate entrance examinations providing their admissions are complete early in the academic year.

The new date would mean Cambridge not completing its admissions until May or June, forcing other universities to wait for some of the rejected candidates.

Oxford has so far taken no view on shifting the dates of its examinations. But if Cambridge decided to go ahead, senior tutors at Oxford will certainly want to discuss the matter.

Poly students challenge union leader

A student union vice president who occupied his own union building this week faces a campus-wide ballot to remove him from office.

Students at City Polytechnic last week carried a motion of no confidence in Vernon Williams, who is responsible for the union's external affairs. Earlier this month Mr Williams took part in an occupation as part of his campaign to boost his budget to £6,000.

President Adam Marks said that five people – two of them City students – were originally involved but only three eventually barricaded themselves into the union's general office. They left some hours later after their demands were rejected.

The declaration of no confidence was led by the executive. Adam Marks commented: "We face a very difficult year and we do not need to have internal problems."

A two-thirds majority of students voting this week is needed before Mr Williams can be removed from office. All of City's 3,500 full-time and 10,000 part-time students are entitled to take part.

The editor of City's student newspaper, Mr Jeremy Finch, faces removal from office in the same ballot. A motion of no confidence in him was passed, complaining of grammatical and spelling errors, and the size of the paper.

North American news

Stanford stands firm on visit

from Peter David
WASHINGTON

California's Stanford University has refused to comply with tough government restrictions imposed on a forthcoming visit by a Soviet scientist, robotics expert Dr Nikolay Umnov.

In a letter to the National Academy of Sciences – which informed Stanford of the State Department's desire to restrict Dr Umnov's activities – the university delared that its campus was open and free access by visiting scholars was regarded as an essential part of its work.

"The university is willing to host Dr Umnov as proposed by the NAS, but we are not willing to accept responsibility for Dr Umnov's actions – either on or off campus – during his visit to Stanford," the letter said.

Professor Bernard Roth, the Stanford scientist designated to host the visiting Russian, described the restrictions proposed by the state department as "absurd."

The government wanted to restrict Dr Umnov's programme to the mechanical theory of robotic locomotion without access to control units or programming techniques for robots. Industrial visits were to be banned and Dr Umnov was to be barred from any Defense Department-funded activity whether classified or not.

Professor Roth said none of the work Stanford had done had useful military application and the Soviet Union was already more advanced in the field than the United States.

Walking machines, which are Dr Umnov's specialism, were a subspeciality of robotics, he said. "The Soviet Union did a lot of pioneering work in this field. Guys in the US who know something about it learned from the Russians – and freely admit it."

Stanford, however, is not regarding Dr Umnov's visit as an isolated case of State Department interference. It is the latest of a number of clashes between research universities and the government over the activities of visiting scholars from nations which could be regarded as potential enemies.

Last November Stanford's director of satellite communication planning refused to respond to a Commerce Department questionnaire concerning the application of export regulations to the activities of a visiting scholar from the People's Republic of China.

In its latest letter to the National Academy of Sciences, the university argued that attempts by the federal government to conceal research developments from visiting scholars would destroy the university's creative research environment.

It continued: "We have more than 1000 separately funded research grants and contracts totalling more than $120m in annual expenditure, of which about one sixth are funded by the Defense Department.

The campus environment is completely open; and the thousands of visiting scholars to campus each year have free access to any of the university's programmes.

"Even if we had the means to monitor or police the activities of visitors, such actions would drastically disrupt the academic environment which is essential in fostering creative research endeavours."

Stanford's hard stand on Dr Umnov's visit has resulted in a policy review by the National Academy of Sciences, which acts as the government's agent in sponsoring academic exchanges with the Soviet academy.

The university's president Mr Don Kennedy told a senate meeting that he had been "suprised" by the willingness of the national academy to forward the State Department's proposed restrictions.

As a result, the national academy has moved quickly to reassure universities that it does not endorse the State Department's policy on scientific exchanges.

An academy spokesman said last week that no more letters would be sent to universities curtailing the activities of foreign scientists until the entire policy had been reviewed.

"Because the questions that have been raised by these latest restrictions are real and troubling, the academy is entering into discussions with the State Department in an effort of modify restrictions that are unenforceable by American universities," he said.

The confrontation between Stanford and the government is being closely watched by the national scientific community in light of recent pronouncements by government officials suggesting that the rules governing scientific exchanges should be stiffened.

At a recent meeting of the Association for the Advancement of Science, Admiral Robert Inman, deputy director of the Central Intelligence Agency, warned scientists that national concern about the leakage of American secrets to potential adversaries could lead to legislation demanding the vetting of research and publication.

Mr William Carey, the association's executive director, last week doubted whether such legislation would be approved by Congress. "I really do not believe that we have gone so far into madness," he said.

But he claimed the scientific community was extremely worried about imminent changes in the export and arms traffic regulations imposed on university research by the state and commerce departments.

He hoped that any new restrictions they contained would be limited to precise and well-defined areas of research, not to whole sub-disciplines like microelectronics. Such a step would give government bureaucrats "intimidating" discretion to monitor scientific publications, he said.

Stanford: confrontation being watched

Reagan accepts blame for charity status row

from our North American editor
WASHINGTON

President Reagan last week accepted personal blame for the controversial decision to give charitable status to private schools and colleges which discriminate against black people.

He told a press conference that the White House had regarded the mensure as a temporary procedural step and had been surprised at the angry reaction from civil rights groups.

But he admitted that the decision – which reversed a 12-year-old policy denying tax exempt status to racist institutions – had been mistimed and poorly explained.

"The buck stops at my desk. I am the originator of the whole thing and I am not going to deny that it was not handled as well as it could be," he said.

The president's remarks followed a fortnight of frantic activity in the White House to explain and ultimately reverse a policy decision which had widened the breach with black Americans and brought a torrent of public criticism.

Three weeks ago the Justice and Treasury departments said they would be abandoning a rule imposed by President Nixon in 1970 denying tax exemptions to private schools and colleges which refused to renounce discriminatory policies.

A huge public outcry resulted four days later in a sharp U-turn with the president announcing that the Nixon rules would be reinstated – but only after Congress passed legislation to that effect.

Meanwhile about 100 colleges previously refused tax exempt status would receive it, and the Justice Department would drop a Supreme Court case against two of them: the Bob Jones University in South Carolina and the Goldsboro Christian schools in North Carolina.

When the protests continued unabated and civil rights groups threatened immediate legal action to force the courts to uphold the suspended Nixon rules, the president made a second intervention last week.

He said that the 100 schools which theoretically qualified for the tax exempt status would not in practice get it and announced that a bill had been sent to Congress which, if passed, would restore the Nixon rules.

At a press conference a day later he admitted that the entire affair had been poorly handled but complained that the original suspension of the Nixon rules had been misinterpreted by the press.

The action had been prompted not by a desire to confer charitable status on racist institutions but by the administration's belief that the Nixon rules, which had been interpreted by the Internal Revenue Service, yielded too much power to a government agency.

He continued: "What we were trying to correct was a procedure that we thought had no basis in law, that the Internal Revenue Service had actually formed a social law and was enforcing that social law.

"What we set out to do was to change that procedure and stop the Internal Revenue Service from doing this and then to have Congress implement with law the proper procedure."

But neither the president's explanations nor the rapid introduction of a bill restoring the status quo has muffled public confusion about the administration's real intentions.

That confusion has been deepened by a statement by the United States Commission on Civil Rights flatly contradicting the president's view that the Nixon rules, upheld by successive administrations for 12 years, required buttressing by new legislation in Congress.

It said Congress had provided ample legislative basis for the rules in the Civil Rights Act of 1964 which prohibited racial discrimination. A federal court in 1971 confirmed that that act empowered the revenue service to withhold tax exemptions from schools which discriminated.

A similar view appears to have existed within the Justice Department itself. Its Supreme Court brief in the Bob Jones University and Goldsboro schools case argued that the revenue service "acted well within its statutory authority" and said that Congress was aware of the tax rules the service was operating.

On White House instructions, the Justice Department has dropped its case against the two institutions, although White House spokesmen expressed confidence that both would be stripped of their tax-exempt status once Congress approved the president's bill.

Civil rights groups, meanwhile have petitioned in court for the right to prosecute the two institutions themselves in view of what they describe as the federal government's dereliction of its duty to uphold existing civil rights legislation.

Reviewing the whole episode in a television interview last week, Mr Ed Meese, the White House counsellor, said: "We blew it because we didn't have our legislation ready to go at the time we changed the IRS policy".

Reagan (above): an apology for abandning the Nixon rules

Carnegie president calls for overhaul of teacher training

A thorough overhaul of American teacher training was called for last week by Mr Ernest Boyer, president of the Carnegie Foundation and a former United States education commissioner.

In a lecture at Yale University Mr Boyer said that many teacher training programmes were inadequate; accreditation of schools of education ineffective; careful selection of trainee teachers "almost nonexistent."

"In most states the college not only recruits the students and provides the training, but also – through the college's Department of education – certifies the student for credentialed teaching. This interlocking authority is seriously flawed, he said.

In future, he suggested, the teacher training curriculum should include solid training in academic subjects and early apprenticeship in the classroom before certification was issued.

Qualifying to teach would then become a two-stage procedure. Completion of a teacher training degree would lead to provisional certification, followed by a period of salaried apprenticeship before a teaching licence was issued.

Mr Boyer also called for urgent action to encourage more high-ability students to teaching careers. There was "enormously disturbing" evidence that fewer talented people were entering the profession.

Test scores of the verbal and mathematical ability of trainee teachers had declined sharply between 1972 and 1980 with education students ranking fifteenth out of 16 fields in mathematical aptitude tests.

Warning that it would be difficult to attract better students, Mr Boyer commended moves by the state of Florida to give talented students volunteering for the teaching profession an extra stipend.

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Civil rights plans abandoned

The Department of Education appears to have abandoned plans to reduce its own powers to enforce civil rights laws which ensure equal opportunity for black people, women and the disabled.

Mr Terrell Bell, the education secretary, has been considering proposals to change federal regulations in a way which would have removed about 1,000 colleges from the coverage of three major civil rights laws. (*THES*, December 25 1981).

The laws – the Civil Rights Act of 1964: Title IX of the 1972 Education Amendments and the 1973 Rehabilitation Act – apply only to institutions receiving financial aid from the federal government.

The new regulations would have "financial aid" to exclude colleges whose only source of federal funding came in the form of student grants or loans.

Support for the changes was strong within the education department, whose chief lawyer argued that the administration had been elected to curtail the powers of the federal government. But they were opposed by the Justice Department on legal grounds.

Supreme Court sidesteps liberty case

The United States Supreme Court has decided against ruling in a controversial argument between Princeton University and the American Civil Liberties Union over the meaning of academic freedom and free speech.

Princeton appealed to the Supreme Court to overturn a ruling by the New Jersey Supreme Court which held that Princeton could not bar uninvited political speakers from its campus.

The case had been opposed by the ACLU, which argued that a trespass conviction against a member of the right-wing American labour party – later rejected by the New Jersey court – interfered with the political process (*THES*, November 20 1981).

The controversy attracted national interest as a test of the right of private universities to determine who could speak on their campuses. The issue split the higher education community, with the American Association of University Professors and the American Council on Education filing briefs on different sides.

But although the Supreme Court heard oral arguments last November, it ruled this month that it had no jurisdiction in the case.

Overseas news

Bulgaria's need for teaching aids

A major re-equipping of Bulgarian Universities, technical colleges and the Academy of Sciences will be necessary if Bulgaria is to meet the challenge of the "scientific and technological revolution", according to the president and party leader, Todor Zhivkov, in his traditional Students' Day meeting.

The meeting took place on December 7, but the speech did not appear in the press until January 13, when it occupied the first two pages of the party daily *Rabotnichesko Delo* as well as the youth paper *Narodna Mladezh*. The reason for the delay is not clear, but it seems likely that publication was held up to allow the party theoreticians and activists some time in which to study its full implications – not the first time that this had happened with a major policy statement in Bulgaria.

Educational planners, Mr Zhivkov told his student audience, and the country at large must think five years ahead in providing modern equipment for universities and technical colleges. Very few such institutions, he said, were of a satisfactory standard – the Varna Institute of Shipbuilding was one of the exceptions. Particularly deficient in necessary equipment and teaching aids, he said, were the Gabrovo and Ruse technical institutes. But this is not the fault of the Ministry of Higher Education, he said. "The guilt", he concluded, "is ours", presumably meaning the senior planners. And the Politburo was now considering the requirements needed to give students a "solid training" in modern technology.

In certain cases, he implied, this would mean the "requalification" of the teaching staff. In Bulgaria's neighbour, Romania, "reattestation" of higher degrees was introduced some years ago, with higher degrees given not for life but for a five year term, renewal being dependent on progress in one's research and job, as well as non-academic criteria, including political attitude. Mr Zhivkov's speech was not specific on this point – the general context, however, suggested more ad hoc updating courses for middle-aged and out of date instructors, rather than any major change of degree policy.

University education in Bulgaria is slanted at future employment. The four year course has been increased to five and a half years, and now consists of two years of core instruction in a subject followed by two years of narrower specialization. At the end of the fourth year, the job vacancy notices appear on the university notice-boards, and the students are expected to find their future employment.

Having secured a job, the student will then spend the final eighteen months partly in class and partly at the future place of work, so that, theoretically, when he or she starts work after graduation and begins to draw a salary, no working time will be wasted in getting to know the job.

Academics 'free to leave'

Western academics inquiring at Polish embassies about the fate of Polish colleagues have been told that if posts for these people could be found outside Poland, "no objection" would be raised to their leaving the country.

This appears to be part of a major purge of Solidarity individuals, suggested a few days ago by the army newspaper, *Solnierz Wolnosci*, which said that although there was a place in Poland for a re-organized Solidarity, the union would first have to shed its "35,000 intellectual advisers".

At a meeting with "representative workers" in Lodz, the Minister for Trade Union Affairs, Stanislaw Ciosek, gave similar hints: the union movement, he said, must return to its "class basis".

Already there are unconfirmed rumours that Dr Henryk Samsonowicz, the rector of Warsaw University, who was appointed in September 1980, immediately after the foundation of Solidarity, had been sacked. He was previously reported among the many hundreds of academic detainees, and has certainly been expelled, in the last few weeks, from the Communist Party. Mr Artur Swiergiel, a Solidarity activist from the Warsaw regional executive, who is at present doing postgraduate research in Cambridge, expects there to be a purge of all democratically elected rectors within the next few months, and an even larger purge of young academics and student activists from the banned "Independent Students' Union".

It is likely that numerous university rectors – as well as Solidarity activists from the universities and former NZS leaders, will refuse to sign the new oath of loyalty. The new rules of conduct for the universities under martial law make it clear that 'continuance of studies will be dependent on the proper political attitude, and widespread expulsions seem all too likely.'

Continuous assessment blamed for apathy

from Geoff Maslen

MELBOURNE

The replacement of examinations by continuous assessment has been blamed for a "torpid" mood on Australian campuses and apathy among students.

Sir Zelman Cowen, governor general of Australia and, from July, the new provost of Oriel College, Oxford, said that he had seen such a trend developing in the early 1970s and found it a matter of concern.

Opening the fourth conference of the Australian and New Zealand Student Services Association, at La Trobe University, Sir Zelman said that the pressure of heavy and unrelenting assignments and continuous assessment caused widespread distress.

"The organization of the university year with the constant pressure of assignments due to be finished on time and continuous assessments leaves many students with little or no time for involvement in many aspects of university life which can provide personal enrichment and growth," he said.

Sir Zelman looked back in fond ness at his own days as a university law student at Oriel and New Colleges, Oxford, in the 1940s. "There was never a time when I had a better understanding of the law and its complex interrelationships. It was hard and stressful, but immensely rewarding, and I could never have achieved it by a system of continuous testing which certified one bit by bit. Successively locking up each bit, and then proceeding to another, often, I suspect, without much awareness of interrelationships."

Was it these views then which ensured that the governor-general became Oriel's new provost and not take up a second term as the Queen's representative in Australia?

When Lord Swann resigned, Cowen let it be known he was available and turned down Mr Fraser's offer of a second term as governor-general.

Sir Zelman: returning to Oriel

Yoga on the curriculum

from A. S. Abraham

BOMBAY

Indian universities have been asked by the University Grants Commission to include a paper on "morals" and "ethics" in examinations for all faculties. An official circular, sent out last June, says that the UGC "desired" universities to promote the "inculcation of ethical and social values" in higher education.

The paper, says the circular, should teach these values directly and indirectly. The indirect or "integrated" approach lacks a formal syllabus and moral and ethical concepts are to be taught on a regular classroom basis.

Class periods can include, to quote the UGC circular, "a) daily assembly with reading from scriptures and holy books; b) talks by eminent religious/spiritual leaders (at least monthly once); c) regular participation in sports, games and yogasanas (yoga exercises) and meditation; d) seminars on ethical topics; and e) recognition of students with outstanding moral values."

The direct method is through "formal courses" and "cocurricular activities", including "transcendental meditation" (TM) and the teaching of "great saints of India".

Acting on the directive, Bombay University held a full-time, four-day course in TM in September given by followers of the Maharishi Mahesh Yogi, who is known in the west. Heads of department have been sent circulars asking them to make time for a delegation of Rajneesh followers who will instruct students.

Scientific boost for Sri Lanka

from D. B. Udalagama

COLOMBO

An Act of the Sri Lanka parliament has provided for setting up a Third World Institute of Fundamental Studies in the island. The director – designate of the institute is Prof. Chandra Wickremasinghe, professor and head of department of applied mathematics and astronomy of the University College, Cardiff, who will continue to maintain his present appointment and research commitments in the United Kingdom.

The idea of such an institute in Sri Lanka was welcomed by foreign ministers of non-aligned countries who met in Delhi last year as it could "assist the scientific talent in the Third World to work closely with the international scientific community, taking into consideration the great need and urgent necessity for such centres among the non-aligned countries as might contribute to the development of basic science and technology relevant to the developing needs of the Third World".

Professor Wickremasinghe has said that he sees his role in the institute in two parts. Firstly, he proposed to steer a course that will lead Lankan science from its present insularity to wider horizons in the direction of internationalism.

Secondly, he would like to encourage research on projects that are truly inter-disciplinary, combining also – wherever possible – projects that are purely abstract with those that have immediate practical application in the context of the developing world. Professor Wickremasinghe has also said that at present the Third World is poorly served with centres of excellence in basic science. Research in such disciplines as mathematics, physics, chemistry and astronomy was in general considered of low priority in developing countries.

● A new Students Loan Bill is under preparation making it obligatory for employers of graduates to recover and remit bank loans they have obtained. The decision to enact the new law is reported to have been taken by President J R Jayewardene, who is also Minister of Higher Education.

The measure has become necessary because two state banks – the Bank of Ceylon and the People's Bank – have been unable to recover some Rs88m out of Rs100m granted as loans to undergraduates since the inception of the scheme in 1971.

The new legislation also makes it obligatory for undergraduates to provide guarantors to ensure repayment of loans. At present loans are granted on personal guarantees of students.

The cabinet recently decided to increase the quantum of loans to Rs300 a month (from Rs225) but the two banks are reported to have declined to act on the decision because they have been unable to recover the loans given to students who have since graduated and found employment.

Irish engineers to train Jordanians

Irish engineers, from the Republic and Northern Ireland, have won an EEC contract to develop a new faculty of engineering and technology in the University of Jordan.

The EEC is providing more than IR£4m to assist the development of the faculty. Of this some IR£1.3m will be administered by the Higher Education for Development Co-operation – an Irish inter-college agency which assists students and colleges in the third world.

Hedco will provide visiting professors and technicians, provide training for Jordanian staff in Jordan and Ireland and promote academic exchange between the two countries. The remaining IR£2.7m will be spent on the purchase of equipment.

Jordan University was established in 1962 and now has 10,000 students. In 1976 a new faculty of engineering and technology opened; the EEC and the government of Jordan are jointly providing funds for a new faculty building which is presently under construction.

Several European countries competed for the EEC contract and winning it was a considerable coup for Hedco, a company limited by guarantee.

Cure for malaria nearer

from Thomas Land

GENEVA

A chance discovery by research workers at the Hebrew University in Israel has led to the development of a powerful new bacteriological weapon against a group of diseases including malaria.

Scientists at Canada's Lethbridge Research Station have also developed, in cooperation with colleagues at the University of Washington, Seattle, a fungal agent for the control of insects spreading several diseases of global public health concern. Both microbiological agents are deadly and very selective.

Both have attracted the intense interest of the United Nations' World Health Organization here because they promise a huge against diseases which affect much of mankind by perpetuating hunger in the tropical belt.

The sequence of events leading to the development of the new anti-malarial agent began in the Middle East where scientists retrieved bacteria-infested dead mosquito larvae from ponds, and found them promising for future investigations. They sent the bacteria cultures via the WHO to the Institut Pasteur in Paris; and they were eventually identified as a hitherto unknown variety of *bacillus Thuringiensis*.

A WHO spokesman says that the bacteriological agent has "the property of killing the mosquito vectors of malaria and the blackfly vectors of river blindness (*Onchocerciasis*), two diseases which affect hundreds of millions of people in some 90 tropical countries".

The fungus used in the North American experiments is native to irrigated areas of western Canada. Several tropical insect species, including those carrying varieties of sleeping sickness and yellow fever, have been proven vulnerable to the "water mould".

The diseases against which the two agents may soon be deployed in a big way have acquired much economic importance during recent years by slowing down agricultural development in vast regions through affecting their populations. Man-made lakes and irrigation systems intended to improve living standards in the developing countries have, in fact, altered the ecology to the worse by aggravating major disease problems.

Successful first year for positive discrimination

from Craig Charney

JOHANNESBURG

Johannesburg, South Africa's first "affirmative action programme" has completed its first year at the University of the Witwatersrand.

Like its American counterparts, the programme relaxes highly competitive admission standards for students from "disadvantaged" backgrounds. Virtually all those admitted in this way are black.

This could be a pointer to the way South African higher education will evolve if the race bars at universities are dropped.

At Wits, 18 black students were admitted under special permit among a 1981 intake of 200 at the white medical school. Only six would have got in if the same marks in the school-leaving matriculation exam had been demanded of them as of whites.

Once admitted, the normal first-year course was spread over two years for the special students. Courses in study skills, English, and other areas useful to students with weak backgrounds were added to the curriculum.

Special tutorial services were available for students whose first language is neither English nor Afrikaans.

Of the 12 students who began the special programme last year, all are carrying on this year, though some failed a subject. More will be admitted at the start of the academic year in February.

The medical school sees affirmative action as a way to recognize talent which could otherwise be ignored.

"We are trying to redress a wrong. There are inequalities in the educational system at present, and certain people don't get the education others do, though they may have equal talent" said Professor Saul Zwi.

According to Dr Peter Hunter, a university administrator, experience has shown matric results to be poorer predictors of university performance for blacks than for whites. A borderline mark for a student from a poor black school suggests better potential than a similar mark for a student from a privileged white one.

Counting the real cost of compensation

Ngaio Crequer with some sums on the CVCP's redundancy scheme

In answer to pleas from all quarters affected by the university cuts to either slow down or pay up, the Government has decided to do the second, chiefly because it does not trust the universities.

Towards this end the Government has announced approval for the redundancy compensation scheme drawn up by the Committee of Vice-Chancellors and Principals.

The scheme, based on one for civil servants retired in the public interest, would provide compensation of up to £55,000 for lecturers made redundant.

For months the point was made and evidence collected to show that implementation of the cuts at the Government's ordained pace would cost more than the savings expected. But the Government believed that spreading the cuts over a number of years would ease the pressure so that the universities would avoid radical restructuring.

Sir Keith Joseph, Secretary of State for Education, said on BBC television's *Nationwide* two weeks ago that unless the pressure was sustained the universities would not shift their resources from the arts to the less adequately supported engineering.

This, he said was the advice he had received, and though there would be great transitional pain, there would only be a small amount of damage.

Nationwide had chosen Salford University to illustrate the effect of the cuts and a film repeated the facts so well-known, a 40 per cent cut in expenditure and a 30 per cent reduction in student numbers.

And it was Salford University which was praised in the most glowing terms later that week by the Prime Minister after she had just opened the new headquarters of the university's industrial centre. She warmly congratulated them on everything they were doing, expressed her faith in the university's future and the work it was doing in such close contact with industry and said she would "faithfully report it to the appropriate quarters." Will this include Sir Keith?

Salford has already told the University Grants Committee that it will need to reduce its academic staff by 151 between October 1981 and 1983-4, as well as 93 technical and 32 secretarial/clerical staff.

It is difficult to estimate the bill for the academic side because the national redundancy scheme is based on age and length of service and it is not yet known who will be made redundant.

Under the CVCP scheme, lecturers aged under 50 would receive a lump sum of two months' pay multiplied by his or her length of service, plus a pension at the age of 65 and a further lump sum.

So a lecturer aged 30 with five years' service, earning £7,700, would receive £3,210, plus a pension of £481 at 65 and another lump sum of £1,444.

A lecturer aged 39 with 14 years' service, earning £11,000, would receive a lump sum of £21,091, plus a pension of £1,925 at 65 and £5,775. A lecturer aged 49 with 24 years' service, earning £15,410, would get a lump sum of £55,212, plus a pension of £4,623 at 65 and a lump sum of £13,869.

For staff aged between 50 and 55 the CVCP recommended that in addition to the Premature Retirement Compensation Scheme (PRCS) benefits of pension and lump sum to which they are already entitled, they should also receive a further lump sum related to age, length of service and pensionable salary. The pension would be inflation-proofed, as it is when they reach 55.

But the Government has decided to slightly modify the CVCP scheme for redundant academics aged 50 or over.

This week's statement said: "Staff aged 50 and over will be eligible for reimbursement only up to the maximum that individuals would be eligible for under the existing premature retirement compensation arrangements for members of the Universities Superannuation Scheme and that pensions will be indexed only from age 55 as at present, in line with provisions of the pensions Increase Act 1971."

The existing scheme for this group provides for the granting of nominal additional years of service with annual pension and lump sums being paid immediately on retirement on the basis of the aggregate of the actual years of pensionable service plus the extra years granted.

The number of these extra years depends on past and prospective service but cannot be more than ten.

So how much would it cost Salford if they had to make 150 academics redundant and the CVCP scheme, or something similar, were in operation?

If one assumes that the average lecturer is aged 40, the immediate lump sum payable (excluding pension and further lump sum at 65) amounts to £3,570,000 (150 x £23,800).

On top of that there would have to be compensation for technical and secretarial/clerical staff. Nor does this include any new developments, which restructuring is also meant to be about.

By the end of this month most universities will have returned their forms to the UGC giving the information Salford has already worked out and the UGC and no doubt DES will be doing a far more sophisticated set of calculations than the one above. So far, the highest 'bill' put in to the UGC has been for some £8m and if the average worked out at say, £5m then the £200m mark would be passed.

Nor is it yet clear who exactly would qualify under any scheme, whether it would be open to research workers for example, and what happens to senior administrative staff.

There is yet another intangible. Whatever scheme is approved and implemented by the universities, there is still nothing to stop an academic with tenure, who is made compulsorily redundant, taking his or her claim to court.

The CVCP discussed this when drawing up its scheme and though the members realized that legally the option would still remain, were hopeful of two things.

Either the amount of compensation would be sufficiently attractive to deter the would-be litigant, taking into account the inconvenience and cost of pursuing an action. Or the courts would take into account, in an assessment of damages, the amount of money offered to the lecturer under the scheme.

One possibility mooted was that lecturers should agree to waive their right to contest the redundancy, before the terms of the schome were applied to them, but this would be contentious.

Acceptance by the Government of the CVCP scheme raises implications for the public sector which will be difficult to resist. The polytechnics and colleges will be watching developments with great interest, storing up the arguments for when their financial terms are settled.

Mrs Thatcher: praise for Salford, but will she pass it on?

Examples of what staff would receive under the guidelines prepared by the Committee of Vice Chancellors and Principals and submitted to the Government

Age	30	32	34	37	39	40	42	44	47	49
Years of service	5	7	9	12	14	15	17	19	22	24
Salary	7,700	8,105	8,925	10,160	11,000	11,425	12,305	13,190	14,515	15,410
Calculation of Lump sum	842x5	675x9	744x13	847x19	917x23	962x13 962x10	1026x17 962x10	1099x19 1026x12	1210x22 1099x14	1284x24 1284x19
Lump sum	3,210	5,075	9,672	16,093	21,091	23,600	29,725	36,267	47,190	55,212
Pension at 65	481	709	1,004	1,524	1,925	2,142	2,814	3,133	3,992	4,623
Further lump sum	1,444	2,128	3,012	4,572	5,775	6,426	7,844	9,398	11,976	13,869

Floundering in the pool

Cries of protest have started to come from the losers in the distribution of public sector funds. John O'Leary reports.

It seems hardly credible now, but little more than a month ago the size of next year's Advanced Further Education Pool was being greeted with sighs of relief all round. Many had feared a much greater cut than 3½ per cent, even if they were mildly suspicious of the basis for such a figure.

The honeymoon lasted about as long as the Christmas celebrations which followed Sir Keith Joseph's announcement of a £539m quantum for 1982-3. By the time the New Year had arrived and institutions saw how much their local authorities would be receiving, the recriminations were flying thick and fast. The polytechnics complained about preferential treatment for the universities, the colleges complained about preferential treatment for the polytechnics, and some local authorities were unhappy about the amounts they were expected to contribute.

Even those who did best out of the distribution had some cause for complaint, since a political decision that each authority should take a cut of at least 2 per cent resulted effectively in a penalty for efficiency in three cases.

The "common funding" due to Oxford Polytechnic under the unit cost system devised by the Stephen Jones group (which examined pool distribution) would have yielded an increased budget, but "further funding", designed to top up the budgets of relatively expensive institutions with special circumstances, was used to withdraw almost £1.5m of its pool allocation. Trent and Plymouth polytechnics, too, suffered by receiving only small amounts of further funding to keep to the 2 per cent cut.

However, for most of the polytechnics it was the size of the £539m quantum rather than the method of distribution which prompted delayed criticism. The Committee of Directors, keen to tap the reservoir of public sympathy discovered by the universities, issued a statement which claimed that their institutions would be funded 22 per cent less generously next year than the technological universities after the University Grants Committee cuts.

The 10 universities chosen for the exercise were not only those most closely resembling the polytechnics but also included some of the UGC's prime victims.

Taking the gross funding total of £450m for the polytechnics' 140,000 full-time equivalent students allowed for in the 1982-3 pool, the CDP arrived at an approximate cost of £3,200 per student.

The UGC grants, together with an estimated income from fees, produced an average cost per student in the following year of £4,100. Although the CDP acknowledged that the comparison was far from perfect, partly because of the extra costs to universities associated with postgraduate work, the gap was sufficiently wide to make its point.

The directors' statement concluded: "The CDP recognizes that the universities are fully justified in complaining about the cuts to which they are being subjected. However, the disparity between the level of support to which they will be reduced in 1983-4 and that accorded to the polytechnics in 1982-3 highlights the serious inadequacy of public sector provision.

"The fact clearly demonstrate that the promise given by the secretary of state's predecessor of even-handed treatment for universities and polytechnics is not being fulfilled."

An alternative interpretation is that the figures underline the already well-known fact that universities havealways been more expensive than public sector institutions. The 1982-3 pool will do little to alter that relationship, although the CDP may find a more secure basis for their argument in the subsequent arrangements made for the financing of redundancies.

For the apparently modest average cut of 5 per cent over two years will undoubtedly mean a further loss of jobs in most, if not all polytechnics. There is little fat to trim after two years of a capped pool and even the Department of Education and Science itself anticipates the loss of some 2,000 lecturing jobs in public sector higher education over each of the next two years.

Hardest hit will be North East London Polytechnic which, in addition to losing £1m of its 1981-2 allocation in this year's recalculation of the pool, is expected to cut its budget by 11 per cent by the end of next year. With compulsory redundancies only narrowly avoided last year and the boroughs of Barking, Newham and Waltham Forest in no position to be generous to the polytechnic after 7 per cent cuts in the Rate Support Grant, prospects are bleak.

Teesside Polytechnic is next worst off with a cut of 10 per cent, Brighton loses 8.1 per cent of its allocation and both Wolverhampton and Middlesex 7.5. As an illustration of the likely effects, Sheffield's 3.1 per cent cut is expected to bring the total of jobs lost over two years to 95.

Yet it is the colleges and institutions of higher education which have most to fear from the pool distribution. Although most are accepted to be "cheaper" institutions than the polytechnics (let alone the universities) they are to bear the brunt of next year's economies. The reason given by the DES in its explanatory note accompanying details of the distribution is that the colleges made fewer cuts than the polytechnics last year and now have to take a 9 per cent cut on average to catch up.

However, the main reason for the most extreme cuts, which fall upon some of the larger colleges of higher education, is the method (or rather methods) of assessment adopted by the Stephen Jones group. Because all advanced courses outside the polytechnics are included in the same system, the multitude of colleges with small amounts of poolable work have dragged down the unit costs expected of institutions similar to polytechnics.

In Liverpool, for example, the City College and the polytechnic have roughly similar unit costs, but the polytechnic is listed for a 2.1 per cent cut, while the college could lose 15 per cent of its budget. The situation is complicated by the inclusion of two declining colleges of education which are on the verge of amalgamation with the polytechnic, but the contrast in the DES figures is striking.

Another college which prides itself on being among the most economical of its type, with a staff/student ratio of almost 10.2:1, is Ealing, which is reeling under the shock of a cut of 13.7.

Its director, Mr Neil Merritt, protested long and loud within the Stephen Jones group about the separation of the polytechnics from the major colleges in the new funding system and is none too amused by the DES claim in its explanatory note that "the present method has the endorsement of representatives of the local authorities and the institutions."

As in the polytechnics, the actual effects of the cuts will not be known until local authorities have decided to what extent they are prepared to bail out their institutions, but, with many colleges only now starting to recover from major cuts in the 1970s, the damage will be serious.

Although some of the larger and stronger colleges are to take the heaviest cuts, the 9 per cent norm will be bound to accelerate the process of "withering on the vine" which is the DES euphemism for more college closures. The newly merged Bradford and Ilkley colleges, for example will start life with the last year of a 15 per cent cut and the same is expected of West Midlands College of Higher Education. Charlotte Mason College, at Ambleside, one of those to narrowly escape the axe in the last round of closures, could also face difficulty in cutting a small budget by almost 12 per cent.

Others expected to take large cuts are Worcester and North Worcestershire Colleges (12.6 per cent), New College, Durham, (11.9), Southampton College of Higher Education (up to 11.2) and Matlock College (which will take its share of an 11.5 per cent cut).

By the time the 1983-4 pool comes to be determined, the Committee for Local Authority Higher Education will have taken over responsibility for its distribution, although it may not be able to satisfy the CDP over the size of the quantum. This year's exercise should provide the basis for a more sophisticated unit cost system, while more up-to-date data might in any case secure a better deal for the colleges.

They will be fervently hoping so, especially after a year in which the public sector's student recruitment successes are to be brought to a premature halt through Government action on fees and pooling targets. No local authority is likely to close its college as a result of the 1982-3 pool, but development or even site closures will be on the agenda for some of the larger institutions and some hard-pressed small colleges will find further contraction sapping morale and beginning to place a question mark over their long-term viability.

Mobility is the key to France's future

Researchers need more freedom to switch between the public and private sectors. Guy Neave reports from a recent science policy conference.

The key to France's ability to pull herself out of the economic crisis lies in her research capacity. This was the message given to 3,000 participants at the States General of science policy by the President of the Republic, M François Mitterrand last week.

The meeting, the first of its kind since the foundation of the Fifth Republic in 1958, marked the final stage of a six-month debate which started last July under the impetus of the Minister for Technology and Research, M Jean Pierre Chevenement. It was attended by the Prime Minister, M Pierre Mauroy as well as representatives from trades unions, employers organizations, deputies and local political figures.

The results of the debate are unlikely to be ignored for long. In the next two months, the National Assembly is to draw up wide-ranging legislation in the form of a framework law for science research. Its main purpose will be to permit new models of cooperation between government-based research and that carried out by industry.

One of the main difficulties in the French research world is that its staff, as civil servants employed by the government, are not allowed to take up private sector consultancies. They also tend to be more cut off than their English counterparts since research tends to be centralized in government agencies attached to particular ministries rather than located in universities.

The conference heard reports from 12 working groups. Among the major recommendations were a call for greater mobility of research staff between the public and the private sector. This has long been an issue and one which the previous government had been tackling, albeit in a desultory way. The need for new posts was well to the fore as well as the creation of special grants to attract more young people into the research.

Particularly ambitious is the programme for developing industry's research capacity. Estimates reckon that if this is to be strengthened adequately, the number of research trained engineers must be doubled over three years. This will mean there are around a million across the country at all grades.

Turning its attention to the conditions for a successful implementation of the revitalized research policy. It was noted that far more attention ought to be paid to informing the public. Scientific and technical information should be fundamental to a society that lived in a technological age, one of the speakers said. If the public is to participate in the debates over the type of society it wished to live in, it must be aware of the implications – environmental, economic, social and political – that new developments held. Parents ought to be aware of the importance of a technological culture just as well as the relevance of a humanistic one, the president stated.

To help in this exercise, major research agencies will, in the future, be flanked by "transfer firms". Their purpose would be both to bring the latest developments in scientific research to the attention of industry and to the public.

How can the isolation in which research tends to operate be broken down? This topic attracted particular attention. The need to develop new institutional patterns both between government and industrial research bodies and between the various discipline related agencies is especially acute in France. One of the strategies to bring this about will involve the creation of pump priming projects on which both the public and the private sectors will collaborate. This is to be complemented by creating a network to link all research bodies having an industrial application. Small scale firms are to be included thereby improving research and development.

If these are the immediate results and are of direct application to France's research strategy for seven years, the context of the debate was wider than just the question of institutions and new posts.

France's research strategy cannot be independent of the social and political values of society. Nor, as M Mitterrand himself stressed, can it be seen as independent of a certain political will. If science is to be responsible to society, then society must take a greater interest in science. Beneath the outward appearance, one of the major issues at stake was the question of a redistribution of power inside the research world as between it and the public.

The need for a democratic participation in the science debate was also seen as justifying the breaking down of the academic ivory tower. And in this context, the idea of decentralizing government was no less important to research than it was to the government's policy generally. Though the major priorities would continue to be decided at national level the regions must have a greater say in influencing the type of research undertaken.

Few reports were more controversial that that presented by Laurent Schwartz, professor of mathematics at the top flight Ecole Polytechnique. A first-rate research system, he said, needs a first-rate education system to back it up. The situation was particularly grave, he said. First because of successive cuts in the university budget and second the failure to maintain high level recruitment from the early 1970s had done untold damage. If this was to be put right, radical changes were called for in both higher and secondary education.

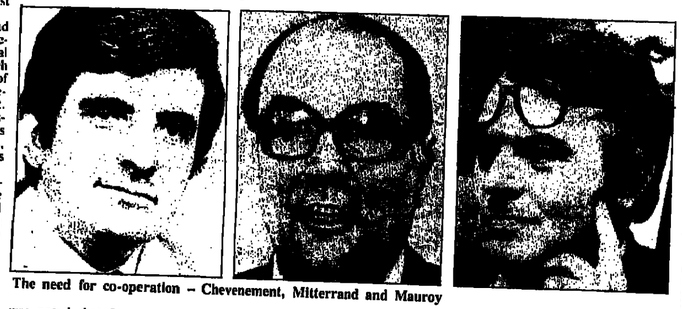
These were crucial since France, like other countries in western Europe is faced with ageing research personnel. New ideas required new people and this meant selecting the most able youngsters in university and giving them incentives, better grants for instance, to be sure the government has committed itself to investing around 2.5 per cent of the gross interior product in research by 1985. But some of the recommendations by Professor Schwartz were not calculated to bring forth applause from the gallery. The idea of introducing selection for entry to university. The raising of student fees from the present FFrs150 possibly to FFrs2,000 per year over the next four years was greeted with incredulity by most of the educational press.

To the vexed question "should the *grandes écoles* be abolished?" the issue of overwhelming delicacy, Schwartz's commission proposed an elegant compromise. The universities could take over certain features hitherto identified with the *grandes écoles* – to wit, selection, a better staff-student ratio and a solid training in relevant professional areas in keeping with the country's need for higher trained manpower. On the other hand, the *grandes écoles* ought to assume certain characteristics found in the university sector. For example, more full-time teachers rather than relying on part-timers many of whom hold key posts in government serice and public sector industry.

However, the greatest fury was reserved for the professor's comments on secondary education. Our comprehensive schools, he said, had not removed social divisiveness. Nor, he said, had they stopped the haemorrhage of able youngsters leaving secondary school without qualifications. On the contrary, the comprehensive school appeared to have increased selection. In essence, it has failed in its principle task which was to raise the scientific and technical knowledge in the population as a whole.

Although presented primarily as a rethinking of science and research policy, in reality, the French government is engaged on a far wider programme of social reconstruction of which science is the key point. The explicit aim of this reevaluation, as President Mitterrand said, is to develop a technological culture as relevant to the population as humanities oriented values are still today. It is the government of M Mitterrand. research is both a result and a consolidation of reorienting scientific and political priorities. They are complementary to one another.

This is not unreasonable in a country where technocracy rules. That research policy should be seen as a means of "priming the economic pump" reflects the fact that both M Mauroy and M Chevenement are both good Keynesians. But it could also be said that democratizing research is also a means of opening up the heartland of the technocracy to public scrutiny.



The need for co-operation – Chevenement, Mitterrand and Mauroy

Scottish social scientists fight for full recognition

The recent fears in England and Wales that social science students could be barred from certain areas of teacher training have overshadowed the latest developments in a prolonged and convoluted battle by Scottish sociologists for a change in Scottish teacher training entry qualifications.

In Scotland sociology does not have the status it has in England. It is not a school subject, and although many would argue that modern studies, which appeared in the Scottish curriculum in the early 1960s, is now its broad equivalent, an honours degree in one social science subject without passes in two others does not qualify a graduate to teach modern studies.

Sociology's position in Scotland is paradoxical, given that it had its origins in the Scottish enlightenment, and that its seminal figures include Scots, although the prophets were without honour in their own country. William Robertson Smith, who directly inspired Emile Durkheim, the father of French sociology and the modern French educational system, became a Cambridge professor. One of the influential sociologists of the 20th century was Robert Maciver, who left Scotland for the United States and became involved in the scholarship of politics in America.

Nobody seems able to explain the disappearance of sociology from Scotland. But when it began to re-establish itself in the 1960s it was suffering from suspicion south of the border. Sociologists who claimed sociology departments had been penetrated by radicals.

Perhaps unconsciously, the Scots decided that this was not a suitable subject for school children. Matters were no doubt compounded by the inherent conservatism of education in general and Scottish education in particular. While sociology was able to be introduced gradually in England and Wales by individual examination boards, in Scotland the national curriculum is controlled by the Scottish Education Department, a body not given to rash innovation.

The earlier introduction of sociology into the English tertiary sector, and less stress on control over teaching qualification, also meant a teacher lobby for the subject to be taught in schools. But in Scotland there was no such link, for the new young graduates of the increasingly popular social sciences were far from reaching influential positions, and the decision makers were inexpert in the field.

During this time, modern studies had emerged quietly in the schools, beginning as an alternative to history and geography for less able pupils. But its position has been shifting under pressure from staff until it has become primarily orientated towards sociology and politics. Indeed, sociologists claim their subject comprises 85 per cent of the new Higher curriculum brought in last year.

The universities have recognized this shift. Modern studies is now regarded as a separate, entrance qualification from history and geography. Previously they were mutually exclusive.

"But this has not been matched by a relaxation of the teaching qualifications. Admittedly, history, geography and economics graduates have now been joined by sociology, politics and economic history graduates as potential modern studies teachers, but only if they passed on year courses in another two of these subjects.

The man who has spearheaded the 15 year campaign for the recognition of sociology as an adequate qualification by itself is Professor Robert Moore, head of sociology at Aberdeen University.

The SED's line has always been that modern studies must be multi-disciplinary and this must be reflected in a graduate's degree, Professor Moore feels. This is specious.

"There seems to be confusion or ignorance in the minds of people making the decisions. They seem to believe that the social sciences are academically very narrow. The need for modern studies to be interdisciplinary sounds all very well, but I wouldn't say that having a higher degree in sociology with O-level passes in history and geography makes you a master of three disciplines.

"All social sciences feed one another. There are many developments in geography and economics and politics which derive from work in sociology and vice versa, and it is quite wrong of people to see any of them in terms of very narrow intellectual bases. This is the part of the argument we seem unable to get across."

Aberdeen and Glasgow find it particularly galling that they make a significant contribution to the in-service training of modern studies teachers, but are still not considered to give an adequate pre-entry training.

Proponents of sociology's case have been lobbying not only the SED but also the General Teaching Council of Scotland.

The deputy principal of Jordan College of Education, Mr Alasdair Nicolson, two years ago suggested to the GTC a possible solution which has, as yet, borne no fruit, that university honours sociology degrees be scrutinized and different areas related to the appropriate subject qualification. For example, he said, if aspects of urban sociology could be keen to relate to an urban geography course, this could be considered a geography qualification, or political sociology could be considered a pass in politics.

Professor Moore by no means opposes this suggestion but he is swift to point out the anomaly in the present regulations:

In a letter to the GTC, he asked whether they were sure that all first year politics and geography courses were suited to the education of future modern studies teachers. There could be a wide variation in courses, and a geography student might be awarded a pass without having considered urban questions.

The argument rolled on, hampered by the GTC's standing orders which forbid a matter to be discussed for six months after a decision had been taken on it.

But after Professor Moore, and Glasgow's head of sociology, Professor John Eldridge, delivered a paper to the GTC's education committee, their case appeared to have been accepted.

Mr Neil MacInnes, the committee's convenor, said recommendations from the SED for the new modern studies syllabus fitted almost exactly what sociology degree courses were doing, and he could think of nobody better suited to teach it.

But it was too early for sociologists to congratulate themselves before any firm recommendations were made. The conveniorship of the education committee had changed, and the committee reverted just before Christmas to its former view of the multidisciplinary nature of modern studies, unconvinced that the syllabus had moved so far in the direction of sociology that it alone would provide sufficient breadth for teachers.

Sociology, said the new convenor, Mr Ian Goldsack, was asking not for a fair place but for an exceptional one.

There are those who feel sociology is indeed a special case. Mr Warwick Taylor of Moray House College of Education, the only Scottish large sociology content, and it would be prudent to ensure that we have students coming forward for training who have a background reflecting the demands of the curriculum.

But Professors Moore and Eldridge refuse to press the point. "We don't argue our case to the exclusion of other subjects," says Professor Moore. "We would regard all single honours degrees as adequate to teach modern studies."

In November, Professor Eldridge mobilized Glasgow's social science faculty, which made a joint submission to the SED asking that single honours sicrte be considered adequate.

This will be considered by the GTC at its next education committee meeting in February.

Olga Wojtas

In music, art and literature accident can be a powerful tool, says Alan Burns.

Writing by chance

Stockhausen (top); Jackson Pollock artwork (left; Max Ernst (right).

Absolute aleatoric art is rare, but it happens. John Cage's *4'33"* consists of random sounds heard during that time span. The listener/composer creates the piece. Cage contributes the impudent concept:

"There is no such thing as silence. Something is always happening that makes a sound."

Stockhausen instructs *his* soloist to twiddle the knob of a transistor radio and to use as a starting point any sound that takes his fancy. This absolute acceptance of the rule of chance induces a sense of communion with the universe that balances precariously between the God-like and the dotty. Stockhausen:

"I am not making my music but transcribing the vibrations I receive. I am a radio receiver . . . if I have composed correctly it is because I was no longer myself." Stravinsky is shorter and sweeter: "I heard and wrote what I heard."

More down to earth (literally) yet inhabiting the same territory is the British artist Mark Boyle. He spins a map of the earth's surface and lands a pencil point on a random spot. He goes to the place, and Boyle calls the resulting "presentations" *Epikotes:*

Epikotes consist of real street, beach or bomb-site surfaces, permanently fixed with a plastic produced by Shell, called Epikote. They are shown vertically, ie hanging on a wall . . . the relationship of leaves, cigarette butts, bricks and shells is there . . . isolated from their general environment. . . ". The essential attitude at the basis of my activities is the total acceptance of the results they provoke.

Boyle's materials, leaves, cigarette butts . . . recall Kurt Schwitters' marvellous collages, but there is a vital difference between the two. Schwitters declares:

"I don't see why one shouldn't use in a picture, just as one uses colours made by paint merchants, things like old tram tickets, scraps of driftwood, cloak-room tickets, ends of string, bicycle wheel spokes – In a word, all the old rubbish you find in dustbins or refuse dumps."

That sounds like random to the point of abandon but there is a contradiction here between Schwitters' catholic receptivity in the gathering of raw material, and the deliberation, the cultivated sense of design evident in the end product, the framed, exhibited collage. Even in Schwitters' spontaneous accumulation of junk, there was an element, only partially suppressed, of selection. It wasn't *any* old tram ticket that found its way to his studio, or he would soon have been submerged in his own material. He kept what caught his fancy, and in his fancy, governing his choice of material, the dim forms of future collages were taking shape.

The junk used by Paolozzi and Claes Oldenberg is the heavyweight debris of modern industry, but in describing his working method, Oldenberg's vocabulary is close to Schwitters':

". . . the material came along . . . I just happened to find . . . It begins with the material . . ."

Note not merely the words but the state of mind, a mumbling, grumbling, sifting, searching, meandering between the conscious and the unconscious, a constant alternation between the aware and the needed unknown, a crafty eye for the main chance, edging, nudging the unconscious towards those places where the most useful accidents are prone to happen. Henry Moore, who tramped the beaches for the chance find of the "right" stone or bone, "happened" to set up his studio on the site of an old slaughterhouse.

Oldenberg's regard for "the material" recalls Moore's famous dictum; things which you will be able to reduce to their complete and proper forms".

Picasso said: "I do not seek, I find."

He found fish bones on his plate and used them to design a ceramic; he found in his garden the bits of a bicycle and constructed a goat. Max Ernst placed paper over grained wood, rubbed with a soft pencil. The resulting lines and patterns underlie *Europe After the Rain* and his other great frottage-based paintings of birds and forests. Ernst even rigged up a little scaffolding over a canvas, suspended a swinging, dripping bottle of black ink, gave the bottle a flick, and the spattered arcs of dribbles of ink formed the basis of *Man Intrigued by the Flight of a non-Euclidian Fly.*

A. Calder's mobiles are the random element in a delightful way that shows that great art can also be simple fun. Francis Bacon's way of introducing the aleatoric element needs for its technology no more than a piece of rag. Bacon, who said (or is said to have said) "life is an accident and so is art" paints his portraits in two stages. First he creates a meticulous, photographic likeness. Then he drags a rag across the features to make them blur, which puts the face in movement, the sitter in a state of flux, and suggests a moment of anguish, humour, expectation. The use of the rag is sentimental in that it seems destructive und also because it cannot be thought out. The act is unplanned, the end result cannot be anticipated. Only afterwards does the painter discover what he has done.

Good as they are, these games are not the end of the matter. There is a vital second stage. Leonardo says his method will "quicken the spirit of invention" to produce "an infinity of things", but those things will need to be "reduced to their complete and proper forms". In his *Notebooks* Klee writes that initially the painter merely

". . . allows forms to arise. He has no plan, no direct intention. . . ." but as the process continues:

"He is glad to contribute something to this self-forming work, this or that, adding an accent to accents, directions to direction, in order to clarify, emphasize, etc. He knows a great deal, but he only knows it afterwards."

Pollock speaks with feeling of that "afterwards" . . . returning to his studio "the morning after" to contemplate the frenetic material, discern the usable elements, where to retain, where restrain. Jim Dine too:

"I was not conscious . . . in a hallucinatory state without drugs . . . I had to come back the next morning to see what I had done. . . ."

It is Aragon, writing on Ernst, who best describes the special sensitivity needed at that second stage, where the conscious mind must give form to chaos without destroying its precarious qualities:

"The place to catch the genius of Max Ernst is the place where, with a little colour, a line of pencil, he ventures to acclimate the phantom which he has just precipitated into a foreign landscape."

Music, painting, sculpture, are the front runners in the Aleatoric Stakes because of their abstract nature. When Oldenberg says:

"I know you can push this stuff around till you get what you want out of it. . . ".

Such relaxed handling of his material (silicone rubber) seems easy, natural. The writer or film director finds it more difficult. The intellectual nature of words, the weight of historical and personal associations each word carries with it, makes language peculiarly resistant to being "pushed around". The complicated equipment required to make a film, the financial investment, the need to co-ordinate diverse disciplines and to follow a preconceived script, makes free-wheeling receptivity almost unattainable. But it can be done. Eisenstein kept a door open on the set "for the unexpected to come in." Godard exploited the random possibilities of film collages. Interestingly, the traditional Flaherty was committed to the aleatoric method. When making *Man of Aran*, he set up

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Every material has its own individual qualities. It is only when the sculptor works direct, when there is an active relationship with his material, that the material can take part in the shaping of the idea.

If the artist co-exists long enough with promising material, productive collisions, fruitful encounters, will ensue. Paul Klee's version of the same process involved the use of the canvas itself as the shaping material:

"Before (Klee) began to draw he would stare for a long time at his prepared canvas. . . . He listened, and it spoke to him through his eyes. And in this way the canvas achieved life through him many years after it was woven."

As Klee painted by *watching*, Morton Feldman composed his quiet music by *listening:*

"I look for experience in the object . . . in the sound which is telling me what happened. . . . It is *in* the sound, so to speak."

Working in a different art form but using strikingly similar terminology, fellow-American Jackson Pollock wrote:

"When I am *in* my painting I am not aware of what I am doing. It is only after a sort of 'get acquainted' period that I can see what I have been about. I have no fears about making changes, destroying images etc because the painting has a life of its own, and I try to let it come through."

Moore's stone, Klee's canvas, Feldman's sound, and Pollock's dripping paint; each "has a life of its own" and the artist's job is to "let it come through". Shortly we will see how a writer can find equivalent techniques, but there is more to be learned from the methods used by other artists who play this subterranean game.

Klee stares, Feldman listens, Pollock hurls paint pots at his canvas until it becomes a battleground on which the wildest collisions and accidents can occur. Methods differ, the end is the same: to create an environment, a relationship between artist and material in which the material "speaks", non-rational perceptions prosper, unpredictable connections arise.

Pollock's creative use of chaos might seem a strictly modern phenomenon, but Turner did virtually the same thing, as this contemporary account of his working methods shows:

"(Turner) began by pouring wet paint on to paper till it was saturated. Then he tore, he scratched, he scrubbed at it in a kind of frenzy, and the whole thing was chaos – but gradually and as if by magic the lovely ship with all its exquisite minutiae came into being."

Pollock and Turner needed a whirlwind of streaks and splodges to reduce to order, but a more passive approach can work as well. Hamlet, provoking Polonius, found ships and camels in clouds, while Leonardo in this passage from the *Trattato* muses upon the damp walls of houses:

"I shall not refrain from including among these precepts a new and speculative idea, which although it may seem trivial and almost laughable, is nonetheless of great value in quickening the spirit of invention. It is this: that you should look at certain walls stained with damp or at stones of uneven colour. If you have to invent some setting you will be able to see in these the likeness of divine landscape, adorned with mountains, ruins, rocks, woods, great plains, hills and valleys in great variety; and then again you will see there battles and strange figures in violent action, expressions of faces, and clothes, and an infinity of

Writing by chance

continued from previous page

numerous cameras throughout the island and let them run hour after hour. A mass of raw material thus accumulated which functioned rather like Schwitters' junk or Ernst's "raw" frottages. Flaherty contemplated the material patiently, watching and listening for the key patterns to emerge, like Klee before his canvas, or like any of the artists (in the different ways) so far considered. This extract from Flaherty's biography, *The Innocent Eye*, describes the process: (I italicize those phrases that echo concepts described so far.)

"Flaherty's actual film-making took place not in the camera but in the projection room. Here he would sit, running through reel after reel, over and over again, panning for the gold nugget, and the only criterion for the recognition of this nugget was his own bare awareness. During this long, tedious process there was no shape to the film, no beginning and no end. Imperceptibly, shots would start to *sort themselves out*, migrating from film can to film can and gathering like molecules round a nucleus. But there was *no conscious thought directing it*. Then one day, months after the start, Flaherty would suddenly realize that he was looking at a sequence. It was a peculiar sensation. One day a mere collection of shots joined up together – the next, a perceptible semblance of a sequence, *seemingly self-generated, organic*. The next stage demanded more patience and perception. . . . Again the projectionists worked day and night. They would have thousands of strips of paper which they would insert in the reel of film when Flaherty pressed a buzzer . . . 'Take out that long-shot, it's dead.' 'Scrap that, we've been pre-conceiving. . . . Never did Flaherty himself intrude on the film. Always he *allowed it to grow from within*.

"Waste" and "trial-and-error" appear as connected concepts common to all manifestations of aleatoric art. The initial accumulation of excess material necessitates the acceptance of *waste*. There is an inescapable need to spend time, creative energy, money and materials in order to produce that "ocean of stuff" for the second stage of the process, the lengthy, patient sifting by *trial-and-error*, during which the "only criterion for recognition" of the gold among the dross is the artist's "own bare awareness". At this stage, the cost of material can become crucial. For once the writer scores, for paper is cheap! But Francis Bacon is said to be the despair of his agents because he throws out 70 per cent of his finished work:

"I waste masses of materials and time because I must let it flow and afterwards salvage what is right."

And Flaherty was married by his financial backers on account of his – to them – incomprehensibly wasteful methods. (He was smart enough to film in places like Aran or the Arctic, where the bankers' cables reached him after the damage was done.)

Before we consider writing, there is one more art form which fits, curiously, into this study: acting. Not any acting but the more instinctive school, particularly The Method. Witness this (rather overblown) account of Marlon Brando at work:

"His acting has the poetry of free association, in that state of mind between sleeping and walking, at the same time clear and confused . . . he moves at the pace of the semi-somnambulist . . . the intellect is dulled but something else takes control. . . .

"Brando's extraordinary power partly derives from 'the poetry of free association' and his ability to inhabit that subconscious territory where, like the other artists here considered, he does not quite know what he is doing, he is both 'clear and confused', he makes unthinking connections and decisions, to create an acting technique with a mysterious, hypnotic appeal. In tapping his own unconscious, Brando produces a response in ours.

William Burroughs says a writer must

". . . learn the techniques that have been used for time past in painting, music and film."

With his "cut up" method in mind, Burroughs mainly refers to aleatoric techniques. But the problem for the writer remains: how to create that mass of material that other artists find all around, in the stones on the beach, in thrown away bus tickets or industrial debris. Words, needless to say, do not occur naturally, but they can be found by the million in those "dustbins and refuse dumps" beloved of Schwitters and Oldenberg. Pulp magazines, newspapers and paperback novels constitute the junk, the bundles of old clichés, ready for Burroughs to cut up and use:

"Words know better where they belong than you do. Alive like animals, they don't like being kept in cages. Cut the pages and let the words out."

The cut up technique does just that. Burroughs snips up the pages and lets the words fall. On his desk the adjective that has grown stale in constant company with the same noun now lies there on its own. Next to it flutters down a new noun, rather, a noun new to its neighbour, the two get acquainted, flirt, marry.

Burroughs' provocative book titles are products of this method: *Naked Lunch*, *The Ticket That Exploded*, *The Soft Machine*. These juxtapositions of images could hardly have been thought up, they bear the mark of accidental discovery. They have not been sought, but found.

The method can be used to make not merely titles but whole novels. Four of my own novels were written this way: I leave the slivers of paper on my desk, with the window open, or a cat or a three-year-old allowed in to further the random order. I return, glance down, a pair of words go together, and another and another.

Like Flaherty's film shots, groups of images "gather like molecules round a nucleus", little piles of slips of paper grow together and being to tell stories. Given the random nature of their origin, what is significant about these books is the family pattern they have in common: powerful father, absent mother, a brother who dies young. The father may appear as judge, commandant or manager, but time and again the same pattern recurs. Thus the random method appears as a genuine way of getting and expressing the writer's obsessive images and root patterns, rooted that is, in the unconscious.

The slivers of paper in inconsequential order encourage the mind to wander, unthinking. . . . The unconscious comes into play while the connexions are being made, and so the cut up works as a way into the unconscious.

Michael Rumacker confirms both the value to the writer of the unconscious, and its connexion with the accidental method:

"The unconscious stores up, gathers into itself, as a slow accumulation, all our experiences. The more poignant, the more deeply does it imprint itself there. . . . The unconscious has appeared in writing mainly by accident. In this rich field of content . . . meanings get there which weren't put there consciously. . . .

Imamu Baraka (Leroi Jones) tells how The System of Dante's Hell was written by delving into his unconscious (to bring up what was initially a ragbag of disparate images:

". . . the Dante stories have literally come together as narrative after the accretion of single images, sentences, and what I call 'association complexes'. These are the individual sound-notes and phrases that build to form motifs that are jammed together to make straight narrative."

There are other variations on the cut up technique. "Newspapers don't need cutting up if read across the columns rather than down. *The Times* obituaries are ideal for this purpose. If, by chance, a botanist, a heavyweight boxer and a narcotics agent die on the same day, a composite personality can be constructed. . . . Animal books can be re-written to reveal truths about humans. In my novel *Celebrations* I describe the dress and customs of a group of lawyers *via* a treatise on the grasshopper. . . . The mating habits of the blow-fly may be studied with advantage. A text book may be placed beside the typewriter and looked at the way painters screw up their eyes to view a landscape, key words picked out here and there. I have typed in a room next to a rowdy party and typed what I heard. As I type slower than people speak, the subject of one sentence leads to the object of another, with the verb hovering uncertainly between. . . . Typing errors often improve the text. An early draft of this article refers to obsessive images *rotted* instead of rooted in the unconscious. And the well-paid Brando is said to derive his power from 'the poetry of fee association'."

B. S. Johnson's "novel in a box", *The Unfortunates*, consists of a box of separately bound chapters the reader is invited to shuffle and read in any order. In *Humument* by Tom Phillips the author has taken a Victorian tract titled *A Human Document* and inked out words and letters to find a book within a book. James Joyce is said to have said "Come in" to a visitor while dictating *Finnegans Wake* to Beckett. When Beckett included the phrase in the text, Joyce said: "Let it stand." Ian Hamilton Finlay, the Scottish concrete poet, prints poems on cards and floats the cards on water, leaving to chance both their movement on the waves and the lapse of time before they dive. The same poet produced *Tug-Boat Annie* in which each page of a booklet is divided horizontally into three and separately hinged to the spine. The reader may combine a third of one page with the thirds of any two others. An intrepid author has re-written Rabelais, substituting for each noun the noun that appears after it in the dictionary.

It is time, before things get completely out of hand, to quote Miro:

"It is essential to have your feet planted firmly on the ground in order to leap into the air."

Here we leap first and laid second. It is the vital second stage that must not be forgotten, when Ernst ventures to "acclimate the phantom" and the writer doggedly edits his fragmented raw material. Each successive draft creeps closer to rationality, but leaves further behind the risk-taking original. The skill lies in knowing when to stop. Stop the re-writing process too soon and the reader is left with a schizophrenic headache; stop too late and the fire is out.

The key to a successful second stage nevertheless lies in getting the first stage right. The rules of this careful/careless game are provided by André Breton in his First Surrealist Manifesto (Secrets of the Art of Surrealist Magic) in which he instructs meticulously on the art of automatic writing:

"Supply yourself with writing materials, after having settled yourself in a place as favourable as possible to the mind's concentration on itself. Attain the most passive or receptive state of mind possible. Forget your genius, your talents, and those of everyone else. Tell yourself firmly that literature is a thoroughly miserable activity that leads nowhere. Write quickly, with no preconceived subject, so quickly that you are not tempted to re-read. The first sentence will come by itself, since it is true that each second there exists a sentence foreign to our conscious thoughts which only asks to be brought into the open. It is somewhat more difficult to make a definite statement about the next sentence: no doubt it partakes of our conscious and unconscious activities at the same time, if one admits that the fact of having written the first sentence implies the minimum of perception. Besides, it should matter little to you, and here lies the greatest interest of the surrealist game . . . Continue as long as you please. Trust in the inexhaustible spirit of the whisper. If silence threatens . . . you have made a mistake – a mistake shall we say of inattention. Make a break at the too-intelligible line immediately. After the word whose origin seems suspect, place any letter, the letter L for example, always the letter L, and restore the arbitrary by making this letter the initial of the next word . . .

How well this chimes with all that has gone before: the insistence on *listening*, the reverence for the arbitrary, the tilt towards magic, all the time holding the rational at bay. Used pure the method can produce astounding prose, as in Breton's *Nadja*, and in this extract from Rene Char's *Artine:*

"In the bed prepared for him there were . . . an animal wounded and blood-tinged, a lead pipe, a blasting wind, a frozen shell, a fired bullet, two fingers of a glove, an oil spot, there was no prison door, there was a taste of bitterness, a glassmaker's diamond, a hair, a day, a broken chair, a silkworm, a stolen object, a line of overcoats, a green tamed fly, a coral brooch, a shoemaker's nail, a wheel of a bus. . . ."

That bed may seem overcrowded but no more than the dream world Char evokes. The Surrealists understood the connexion between the dream and random art. They had their own version of the cut up technique but they preferred the royal road to the unconscious – dreams. De Chirico's novel, *Hebdomeros*, has instead of a plot a series of linked dream sequences. And Ionesco writes:

Dreams are the plays of which we are at the same time actor, spectator and author . . . I find the material for my plays in my dreams.

Aleatoric writing invariably has a dream quality compounded of startling transitions, unexpected juxtapositions of images, and a speed of narrative that De Chirico called "the velocity of a dream". If De Chirico and Ionesco are naturals in this context, the dream world is as important to a traditional novelist like John Gardner. Asked if dreams are important to his work, he replies:

"Absolutely, and to an amazing degree. One story in *The King's Indian* – the whole thing was a dream. I have fully plotted dreams, any novelist does. Over and over dreams enter my solutions to psychological and plot problems. *Nickel Mountain* is built around a recurring dream. . . ."

Dream writing and chance writing are united in their opposition to reason, at least in the first stage of the creative process. Paul Eluard enlists the image in the same cause, when he writes:

"Images think for me".

Breton goes further:

"Idens are ineffective compared to the force of a sudden image. Not 'thought lead to word', but 'word explode into thought'."

The role of the random is clear. If thought is excluded by the suddenness of the creative explosion, then in the chaos much will be left to chance, and the Surrealists say: all the better for that. Aragon hammers the final nail into Reason's coffin:

"In our times there are no longer any ideas; they are rare as smallpox, but it goes without saying that there are images caught, and for once well caught, real slaps in the face of any kind of good sense."

In these dangerous days, the antithesis between Random and Reason is disturbing, both to the artists themselves and to all who feel the need for coolness and rationality when faced with a world capable of self-destruction. One way in which artists try to combat the tensions created by their self-made chaos is by an obsessive care for the technology used in the process. For many it is as if things provide a solid contact with physical reality to steady the mind while it coasts close to irrationality. Burroughs travels with a pantechnicon full of equipment: tape recorders, cameras, typewriters, scissors, scrapbooks, filing-systems. Though it is said of Stockhausen:

"Hand in hand with his mystical leanings goes an engineer's determination to exploit new technical resources."

The dearth of electronic compositions of the first rank partly derives from the degree to which composers of synthetic music are overwhelmed by their own hardware. It works on a simpler plane too: A young American collagiste in Paris worked for a year to assemble a collection of his work, dilligently sticking this and that onto his canvases. He invited Max Ernst to view his work. For a silent hour the master paced the studio, examined the work closely, then made his sole comment: "Und you kind of glue do you use?"

The aleatoric artist's reliance on technology reaches its apogee with computer poetry. The scope of this article permits no more than a nod in this direction, and an example to show that machine-made random compositions, like other work in this field, can touch a nerve, be faintly "right", as well as comic, touching and true:

"The green and big door in front of it is hot, polished, cool, hungry and funny nowhere.

What is coal cold for?

Not only on an engine is it warm.

Is its hot hand polished on stoves?

Not even above it does it find a newspaper under it."

"It doesn't have the shiny and yellow headlights beside heated, tragic and gay flaws and Macpherson behind it frequently."

The politics of random art are complex and contradictory. When Stockhausen talks nonsense about the Age of Aquarius, I become anxious about the company I keep. But a significant number of the artists discussed so far are rationalists and radicals: Godard, Baraka, Schwitters, Burroughs and many more. Surrealists are political as well as artistic revolutionaries, as the events of Paris demonstrated. The bold way of chance is a liberating experience: it is also fundamentally democratic and anti-elitist. The belief that art can happen by accident means that it is all around, not confined to the painter's studio or the writer's study. Schwitters says simply:

"Everything that spits is art."

The author has recently written The Day Daddy Died *and edited (with Charlie Sugnet)* The Imagination on Trial, *both published by Alison & Busby. He is a former barrister and has also written* Babel, Dreamerika!, Europe after the Rain *and* The Angry Brigade.

John Cage: "no such thing as silence".

How long can the SSRC survive in the market place?

Robert Cormack suggests what the forthcoming Rothschild report on the SSRC might contain

Sir Keith Joseph has requested Lord Rothschild to review and report on the work of the Social Science Research Council. A reminder of what the Rothschild debate in the early 1970s was about might help us find out what to expect from Rothschild three months from now.

In a sense Lord Rothschild is returning to complete unfinished business. The SSRC was excluded from his concern in 1971 since it was relatively new and required time to settle down. However, if the same principles applied in 1971 are now to be applied to the SSRC, we can expect applied research (however that is defined) to be reorganized on a customer-contractor basis, and those funds currently disbursed through the SSRC to be transferred to the relevant government departments. The customer-contractor principle simply means: "The customer says what he wants; the contractor does it (if he can); and the customer pays," (Rothschild). This free market arrangement, while in harmony with other policies in the Selsdon period of onward Heath's government, conflicted with the Haldane principle which had guided government-science relations for more than half a century. Sir Frederick Dainton, in the other half of the report submitted to the government in 1971, sought to defend and update Haldane. The debate naturally enough focused on Rothschild's and Dainton's conflicting proposals.

The essence of their differences was caught by Sir Michael Swann:

"Rothschild, on the one hand, wearing a loud check, thumps everybody in sight and hurls around vulgar, academically disagreeable phrases like the 'customer-contractor principle', in staccato fire. Dainton, on the other hand, in a well-cut, dark suit, analyses soberly and reasonably the troubles of a piece of the scientific establishment, in tones reminiscent of a professional man to his well-to-do client." .

Rothschild, in the "loud check", represented the thinking of the business world, or, more accurately, the laissez-faire branch of liberalism. Dainton, in appropriate civil service attire, represented the political branch of liberalism.

Rothschild quite frankly expressed the let-the-market-rule, get-the-government-off-the-backs-of-the-people type of *laissez-faire* liberalism which surfaced from 1970 to 1972 before Heath's u-turn and remarkable conversion to corporatism. The faith in the "invisible hand" was nourished by opposition benches most notably by Sir Keith Joseph, before it became the central dogma of the contemporary period. The choice, by Sir Keith, of Lord Rothschild to undertake his assault on the SSRC is therefore unremarkable.

Dainton, however, pursued the other major strand of liberal doctrine: individual freedom and autonomy. The Haldane principle has come to stand for the autonomy of scientists to pursue their own scientific consciences. Lord (R.B.) Haldane's Reconstruction Committee on the Machinery of Government reported in 1918. The two agencies dispensing funds to science at that time were the Department of Scientific and Industrial Research set up in 1916, and the Medical Research Committee set up in 1913. Haldane's committee reorganized these two agencies to allow a greater degree of autonomy both for the agencies themselves and for the scientists conducting research. Autonomy was less a principle, however, than a pragmatic policy allowing, for example, the newly renamed Medical Research Council a wider research mandate than was allowed under the National Health and Insurance Joint Committee, under whose direction it had been since 1913.

Scientific autonomy became more of a *principle* in the bruising debates between radical and liberal scientists in the 1930s. In opposition to J. D. Bernal and the radicals' advocacy of state intervention in science (in pursuit of socialist goals for science), Michael Polanyi and fellow liberals argued vehemently for the autonomy of science and scientists. Polanyi later cogently made the point:

"You can kill or mutilate the advance of science, you cannot shape it. For it can advance only by essentially unpredictable steps, pursuing problems of its own, and the practical benefits of these advances will be incidental and hence doubly unpredictable."

Rothschild directly opposed such views; in the manner which so enraged Dame Albertine, he argued:

". . . the country's needs are not so trivial as to be left to the mercies of a form of scientific roulette, with many more than the conventional 37 numbers on which the ball may land."

Now the "Butskellite" consensus has fallen apart, we hardly need to be told that establishing the "needs of the nation" is a highly contentious issue. In terms of research and development expenditure by government departments in 1971–72, as reported by Rothschild, priorities were presumably established whereby 40 per cent of the budget went to the Department of Defence, 32 per cent to the Department of Trade and Industry, and 17 per cent to the five research councils. In his report Rothschild recommended transferring 4.3 per cent of the total R and D budget from the research councils to various government departments. Looked at within the framework of the total R and D effort the "needs of the nation" were hardly being radically revised.

However, the small area where scientists were primarily in control of funds for scientific research and responsible for setting priorities was now even under threat. Rothschild suggested:

"However distinguished, intelligent and practical scientists may be, they cannot be so well qualified to decide what the needs of the nation are, and their priorities, as those responsible for ensuring that those needs are met."

Who, therefore, is going to set priorities? Sir Keith may not like the priorities set in the past by the SSRC, he may be miffed that it took researchers too long to respond to his suggestions on "transmitted deprivation"; however, the SSRC's funding record has resulted primarily from the various research committees' response to the research proposals submitted by academics at large.

Changes certainly should be made and some are currently in train. (Perhaps the important ones still require to be tackled: Council secretaries need to be restrained from acting like renaissance popes as C. H. Waddington called them, and much more accountability needs to be built in to promote the responsiveness of research councils to the academic community they are supposed to be encouraging and supporting.) However, present R and D budgets of government departments remain large in comparison to the monies distributed by SSRC. For relatively small cost it would seem advisable to maintain support for independent social and economic research. This seems particularly necessary in the midst of the machinations of a divided polity.

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The climate of political science

Ken Burgin examines the work of British political scientists in the past 30 years and the questions they now face

British political science is marked by functionalism and the study of institutions. Political scientists have long observed the law of comparative advantage by importing American blockbusters they could not produce themselves such as the works of Talcott Parsons, Lipsey's *Political Man*, and Almond and Verba's *The Civic Culture*. The Americans have greater resources, yet it is not just a question of resources but of the British temper. The most original and sustained work published in Britain since the war have been produced by three scholars who are, in varying degrees, outsiders: Popper, Hayek and Berlin. Moreover, the work of the first two has often been neglected.

The failure is not only of scale but of synthesis. Though the study of political science has increased – it is impossible, in 1982, to point to an intelligible model of the British political system. We no longer have more than an impressie idea of the state we inhabit. We wait for enlightenment. I will show why this is so.

Writing in 1965 about British government W. J. (Bill) Mackenzie, doyen of the profession stated:

"This is not such a period [of dramatic crisis in English politics]; it could be almost described in American terms as 'an era of good feelings'. Not that the party struggle lacks excitement and loud abuse; but it does not seem to be concerned with anything very fundamental."

This statement is a clear case of cultural lag amounting to a cult of the equilibrium. It is a fair description of the equilibrium that held sway 10 years before – that not even Suez could shake.

In reality the National Plan, born in 1965, was a dead duck by July 1966, and the economy entered a phase of pronounced relative, and ultimately absolute, decline which made it doubtful whether it could sustain accepted institutions. The reelection of governments became unlikely and the classical Labour Party threatened to disintegrate.

The euphoria of the Keynesian quarter-century that closed in 1973 – though seeds of decay were present long before – was known in political terms as Butskellism. It could also be termed Croslandism. The birth of the doctrine was *The Future of Socialism* (1956). This enlightened materialism, supported in its Tory version by Rab Butler, was based on the simple, appealing formula of social and material advance secured by economic growth without redistribution. Nostalgia for it now verges on hagiography as in Lipsey and Leonard's *The Socialist Agenda: Crosland's Legacy* (1981).

More important than Crosland were the three volumes entitled *Philosophy, Politics and Society* published by Peter Laslett in the same decade. We recognize their contents as an agenda for the age: Oakeshott on political education, Berlin on the "decline" of political theory, Rawls on justice, and Dahrendorf on social inequality. What resonance all these were to have!

There is a great ideological uniformity about the period in spite of some superficial bickering. For example, Oakeshott's celebrated inaugural on Political Education (1951) put the cat among the pigeons. Insisting that political education is merely experience lacking an active ingredient, it seemed to deny the role of principle and to reject social engineering. The thesis was attacked by Bernard Crick but when Crick came to write *In Defence of Politics* (1962), politics had become restricted to what Anglo-Saxons are good at. He was guilty of a tremendous topping and stretching of behaviour to make it fit his procrustean bed.

Another landmark is the late R. T. (Bob) McKenzie's superb *British Political Parties*. Its main thesis was that despite their different origins and constitutions the two main parties were equal instruments of government. This meant that a mainly middle-class Labour leadership elite acted, in and out of office, like their Tory counterparts.

McKenzie is the middle term of what I shall call the Nuffield-LSE-Essex axis, the others being David Butler and Anthony King. The axis is characterized by political sociology, psephology and showbiz. It differs from other political scientists in two ways. First, they are part of showbiz and electoral ballyhoo and have an existence in the public consciousness divorced from academe. Second, they have always cultivated relations with politicians.

Butler's and Stokes's major work *Political Change in Britain* (1974) has not worn well. It is an attempt to apply an American formula to voting analysis. Its economic data ends in 1970 and is out of alignment with its political data. The galloping decline in Labour support has devalued some of its conclusions.

The final strand of the consensus is interest in parliamentary reform. Leading academics were associated for some years with the Study of Parliament group. Something was achieved but by the time its expensive, very academic, and little read or quoted volume (Walkland 1979) was published, Hanson was dead and Crick no longer a contributer.

These then were some of the strands in the consensus hauling the political science waggon as the sixties closed – enlightened materialism, existential conservatism, legitimation of existing party rule, psephology, showbiz, political sociology, and parliamentary reform. There is great consistency of tone and it is optimistic. Those who breathed its air were ill-equipped to interpret the new politics of trade union power, low growth, inflation, issue-politics, entryism, and a general deterioration in the political culture that were to become a feature of the seventies. Economic growth was assumed to be a *sine qua non* of stable government. Not long before he died John Mackintosh wrote in *The Times* that without a two per cent growth rate Britain was ungovernable.

The decision to devalue the pound in November 1967 was regarded by many writers as an overdue step that would liberate the economy. They disregarded the fact that devaluation can only succeed in certain circumstances, none of which was secured once Roy Jenkins had left the Exchequer. Political scientists on the whole do not understand economics.

The study of the Labour Party was a speciality of the *Political Quarterly*, not least on account of the in-house writing of Mackintosh. By 1970 the intellectual climate had been altered by revisionists such as Skidelsky and it was possible to view the party from a new angle. The 10-year critique begun by Mackintosh in the PQ points to the decay of the party.

The inability to describe the change in the meaning of opposition is one of the greatest failures of political scientists. The absence of a factual account of opposition in 1970–74 is serious. No attempt is made to link up Gallie's distinction between ruling (politics A) and politicking (politics B) with opposition as it was. The 1950s and 1960s saw a great expansion in the study of interest-groups, of which the unions might be taken to be a special case, and of parties. The assumption was made that, in or out of office, the Labour Party did and could contain the unions, moderating and articulating their demands. But in the seventies the unions became a political force able to take on and defeat the government. The analytical apparatus was therefore defective: the unions fitted into neither study.

The experiences of the winter of 1973–74 ended the slumber of political scientists. By 1975 articles were falling thick and fast from the academic press. They were pessimistic, but differed in emphasis. King and Rose, separately, identified government overload. Sam Brittan developed the theme of the contradictions of democracy. The overload thesis seems to me insufficient, because it fails to account for the suddenness of events – it was put forward by scholars who had not dreamt of it five years earlier. The explanation of Brittan seems more plausible. Briefly, the economic market and the political (vote) market produce incompatible results. An admirer of Hayek and an economist, Brittan was capable of insights that escaped most commentators. Subsequently he published *The Economic Consequences of Democracy* (1977).

The absence of prescience in describing mass unemployment and inflation is obvious. Political scientists made two errors. First, they assumed a stability in the system it did not possess. Secondly, they assumed the power of the unions would be exercised benignly. Certain omissions were perverse. For example, *Essays in Reform* (1967) edited by Crick, disregarded industrial relations. Even less excusable, in Stanwood and Giddens' *Elites and Power in British Society* (1974) the trade union leadership elite is not mentioned.

The performance of British political science can only be understood if it is seen as arising from an exceptionally stable society, which is characterized by consensus and a narrow political spectrum. The eminent French historian, Febvre has used the term *mentalité* to describe how a society at any given time is receptive to only a limited range of ideas to the exclusion of others. Karl Mannheim has shown how mental attitudes can change only slowly through generational change. Consequently, it seems to me that the political science elite of the last three decades has little to contribute in the 1980s.

The task of political science in its attempt to formulate a model of the polity is likely to be herculean. How is trade union power to be integrated and legitimized within the constitution? Is Arthur Scargill's insistence on permanent conflict (*New Society*, January 1, 1982) an inescapable premise? How is the corporatism of institutions to be related to the national system of power? How is the state to be maintained in conditions of minimal economic growth? The questions are endless. They will not be solved by politicians in an ideological vacuum. Somebody will have to provide an intellectual framework.

The author is an economist at the Department of Education and Science. He writes in a private capacity.

BOOKS

The successes of the Romanovs

by M. S. Anderson

The Romanovs: autocrats of all the Russias
by W. Bruce Lincoln
Weidenfeld & Nicolson, £10.95
ISBN 0 297 77917 6

Of all the great dynasties of modern Europe the Romanovs have the most tragic and the most spectacular history. The Austrian Habsburgs had to wrestle with difficulties almost as intractable, in some ways more so. The French and Spanish Bourbons showed an equal or greater vulnerability to the forces of revolution. But no other ruling family has accumulated around itself quite the same aura of supreme power leading only to crushing failure, of ostentatious splendour ending in inescapable final defeat.

At least three of the rulers with whose achievements and fate Professor Lincoln is concerned seemed in their own day, in different ways, models of what a ruler might be and accomplish. Peter I in his later years, after apparently wrenching his country free from the clutches of its stagnant and introverted Muscovite past, stood forth to contemporaries as an example, unequalled among his fellow-monarchs, of what might be done by a determined and creative despot. Catherine II, in a more subtle and intellectually appealing way, appeared, and not merely in the eyes of those as time-serving as Voltaire, as the most striking model of the Enlightenment enthroned, victorious abroad and constructively innovating at home. Alexander I, surrounded after 1812 by the enormous prestige given by victory over Napoleon, seemed for a few years not merely the most powerful but also the one truly Christian European monarch.

In spite of the enormous and intractable difficulties they faced in the control and administration of their gigantic empire, difficulties which were very imperfectly understood in western Europe, the Romanovs by the early nineteenth century had undeniably satisfied the obvious and perhaps vulgar but none the less inescapable criteria of success in any ruling dynasty. They had enormously expanded their territories (already well over 2.3 million square miles at their accession in 1613) in the Baltic provinces, Poland, the Crimea and the Caucasus and were before very long to do so in eastern Siberia and central Asia as well. They had made their country – until the end of the seventeenth century despised, neglected, peripheral and hardly part of Europe at all – not merely a European power but the greatest of European powers, one which threatened not merely to lead but to dominate the entire continent.

Moreover this position was used in the nineteenth century (a point often glossed over in west European writing) to safeguard and consolidate rather than to undermine stability and order in international relations. It was a sincere desire to rescue Europe from the destructive energies of the French Revolution which led the Tsar Paul to send an army under Suvorov to Italy and Switzerland in 1799; while long before he became the creator of the Holy Alliance Alexander I had dreamed of an international order which might bring lasting peace to the entire continent. A deep desire to defend such an order underlay the foreign policies of Nicholas I and found practical expression in his support of Denmark against Prussia in 1848 and of the Habsburgs in Hungary a few months later. Even Nicholas II's summoning of the first Hague Disarmament Conference in 1899 (a more doubtful case) can be seen as falling into the same pattern.

During much of the eighteenth and nineteenth centuries, therefore, the Romanovs could present, both to observers in the West and to the tiny politically-conscious minority of their own subjects, an image of success in power – in apparently irresistible growth. Their difficulties, though less apparent, were enormous. Some of them were crudely physical – the obstacles which the sheer size of their huge and thinly-populated empire, with its savage climate, placed in the way of efficient administration or effective mobilization of its potentially enormous resources.

They also faced, however, a more subtle and more fundamental difficulty. This was the lack in Russia of any unified and highly-developed culture, either intellectual or political, based upon strong, well-organized and autonomous institutions and a long and continuous history, of the kind which existed in England or France. By contrast with the smaller, denser, more literate, more highly organized and more legalistic societies of western Europe that of Russia seemed, to the end of the imperial regime, shapeless and lacking the consciousness of an underlying cultural oneness which now united in varying degrees each of the peoples of western Europe.

Throughout their three centuries on the throne the Romanovs ruled through an elite which was small, which was largely non-Russian in origin (it has been calculated that by the end of the seventeenth century almost a fifth of the privileged landholding class from whose ranks the administration was drawn was of Mongol or Tatar descent) and which was from the reign of Peter I psychologically remote from and in many ways deeply unsympathetic to the mass of the population. In the eighteenth century the situation was at least eased somewhat by the fact that the westernized or western-influenced cultural elite, in so far as it existed at all, with hardly any exceptions accepted and supported the autocracy; Lomonosov, the most all-embracing single figure in the intellectual life of the period, is a good example. During the first decades of the nineteenth century this position was still essentially unaltered; Karamzin and Zhukovsky are cases in point. In the later years of Nicholas I, however, this prop for the regime was being rapidly, even brutally, knocked away. By the 1840s Russia was moving into the position which was to prevail until the 1917 revolution – one in which the educated and the intellectual leaders of the nation were increasingly hostile to and contemptuous of the regime and correspondingly disliked and distrusted by it. The cumulatively demoralizing effect of a situation, sustained over decades, in which anyone who wore a uniform or who served the government in any way felt himself the object of the contempt, even the hatred, of a great body of educated and "progressive" opinion is hard to measure; but it was certainly considerable.

Professor Lincoln's book has considerable merits. It is based upon a wide range of printed materials and, for the reign of Nicholas I (of whom he has already published a useful biography), on a few unprinted ones drawn from Soviet archives. It includes a large amount of interesting and generally accurate information. (Though there is, perhaps inevitably in a book of such wide scope, an appreciable sprinkling of factual errors, the great majority of them in the chapters on the seventeenth and eighteenth centuries where the author's touch is least sure.) Nevertheless the overall effect of the book is in some ways disappointing: it leaves an impression, in spite of all the detail it contains, of incompleteness. This stems from the fact that it falls between two stools. In part, as Professor Lincoln promises in his preface, it is a collective biography of the fifteen male and four female Romanovs who ruled Russia in 1613–1917; this personal and biographical aspect of it is well done, interesting and successful. At the same time, however, a great deal of information is included about their foreign policies, about the development of Russian cultural life and, to a lesser extent, about the administration of the empire.

The book thus approximates, for the period which it covers, to a general history of Russia. Yet it is considerably less than that. Economic and social history receives very little attention indeed; and this gap is made more glaring and obtrusive by the attention lavished on other and less fundamental aspects of the story. There are, for example, two chapters concerned mainly with the growth of St Petersburg and its society in the eighteenth and nineteenth centuries. These are well done; but they contrast strangely with the total absence of any discussion of the development of communications, above all railways, which is the most important of all keys to so many aspects of development in Russia in the last generations of the imperial regime. In the same way it seems curious, at least to the professional historian, when so much is said about various aspects of eighteenth-century Russia, that neither the foundation of the administrative colleges from 1718 onwards nor the Table of Ranks of 1722, both important developments on which there is a large academic literature, receives more than the most passing attention.

This sort of criticism is clearly, in a sense, unfair. The author is quite explicit that the study is not meant to be a comprehensive and balanced history and that it "reflects most of all my own interests, preferences, and prejudices about the Romanovs and their Russia". The trouble is that this book attempts to have it both ways. It is much more than a merely biographical study, a discussion of a group of selected personalities. Professor Lincoln has gone a long way towards producing a useful general study of the three centuries of Romanov rule in Russia; yet he has also deliberately turned his back on that objective. It is difficult to avoid, therefore, in reading this book, an impression of lack of proportion and completeness. So much is provided that the reader feels cheated not be given more, not to be fed a really balanced historical diet.

It is clear that the book is meant for a relatively wide and non-professional readership. This is understandable and indeed praiseworthy, and may be a further excuse for its selective and idiosyncratic coverage. It also means, however, that there is an all too comprehensible tendency to concentrate on the picturesque at the expense of the historically important, on the striking and concrete incident, the identifiable personality, rather than on institutions, legislation or abstractions of any kind, which are more difficult to make attractive to that perhaps mythical beast, the intelligent general reader. Thus, for example, the Copper Riot of 1662 in Moscow, which is more picturesque and lends itself to narrative treatment, receives considerably more space than the much more important and far-reaching *Ulozhenie* of 1649. In the same way the reforming efforts of Catherine II and Alexander II receive notably short shrift: the provincial reform of 1775 and the Charter to the Nobility of 1785 are dismissed very summarily and the almost equally important Charter to the Towns is not mentioned at all.

Indeed the author is consistently much less than just to Catherine. Professor de Madariaga's recently published magisterial study of her reign of course appeared much too late to be used by him. Nevertheless his assumption that she was unwilling to make any effort at all to improve the position of the serfs and his persistent assumption that her defence of autocracy was irreconcilable with the Enlightenment, whose ideas she never seriously intended to apply in Russia, are not merely old-fashioned but seriously unfair.

The changes in the nature of Romanov rule and in the relationship of the dynasty to its subjects which emerge from this book are striking. The achievements of the seventeenth century, of the reigns of Mikhail Fyodorovich and Alexei Mikhailovich, were remarkable and are still perhaps underrated by most historians. In the Time of Troubles and again in the Northern War of the 1650s and 1660s Russia may well have lost up to a third of her population. The *Raskol* divided not merely the church but society and the minds and feelings of individuals in a way to which even the Reformation hardly offers an adequate parallel in western Europe. The exploits of Razin were almost if not quite as terrifying as those of Pugachov a century later. Yet society and the state apparatus survived and grew, far stronger at the accession of Peter I than at that of Mikhail in the weakness and desperation of 1613. From Peter to the 1790s the autocracy was a force making for change, by far the greatest such force in Russia.

Probably no court in modern history has seen such gross and sustained vulgarity, such total lack of taste, honour and elementary good feeling, as that of St Petersburg during much of this period. Yet in spite of the brutal coarse-grainedness of Peter himself, the sadism of Anna, the ignorance of Elizabeth and the self-indulgence of Catherine II it was only around the ruler that what was progressive forces there were in Russia could grow themselves. The magnificent cultural achievements of the nineteenth century on the other hand, the equivalent of the Renaissance for Italy or the *Siglo d'Oro* for Spain, owed little or nothing to a dynasty by now more and more out of touch with all the forces of growth and change, all the new energies, of the country.

During the extraordinary silver age of Russian cultural life in the two decades before 1914 this peripheral character of the autocracy, its irrelevance to all that was most vital and interesting in the country's intellectual and even social life, became more and more apparent. Professor Lincoln scarcely does justice to the fertility and intellectual interest of this period. His discussion of modern Russian literature focuses, perhaps inevitably, on Dostoevsky and Tolstoy to the complete exclusion of poets such as Bal'mont, Sologub and the young Alexander Blok; while Mussorgsky and Repin are discussed at some length Stravinsky and Goncharova are ignored. He does, however, bring out well the remarkably conventional tastes of both Alexander III and Nicholas II, their deep attachment to family life and craving for comfort rather than any kind of magnificence. The dynasty which had created St Petersburg, which had inspired the Winter Palace, the Admiralty and the Kazan and St Isaac's cathedrals, ended with an emperor who relaxed by playing dominoes and an empress whose favourite colour was mauve.

Had there been no war in 1914 the regime might well have survived, as Lenin had begun to fear it might. Marked though very uneven economic progress, the effects of the Stolypin reforms, reasonably competent ministers, might well have kept it afloat. But to this achievement the dynasty itself would have contributed nothing. Its task was long done; there was nothing more that Russia needed or wanted from it. Of many aspects of its rise, achievements and fall Professor Lincoln has provided an account which is readable, well-informed and hard to quarrel with in most of its judgments. This is not a book of great originality, depth or completeness; but it may well reach a wide readership and has considerable claims to do so.

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Emperor Alexander II

BOOKS

Thinking better

Critical Thinking and Education
by John E. McPeck
Martin Robertson, £12.50 and £4.50
ISBN 0 85520 383 8 and 384 6

This – the latest in the "Issues and Ideas in Education" series, edited by Robin Barrow – is more a collection of contributory notes than a definitive treatment of its subject. Several of these will be valuable or even essential to that future work.

McPeck starts from the observation that critical thinking, like motherhood, is something of which everyone speaks well; but that there is certainly no similar consensus as to what deserves to be so commended. In trying to explicate the essence of critical thinking, and in discussing earlier attempts to do the same, McPeck wants to draw a drastic educational conclusion – "Critical thinking cannot be a distinct subject" – from the premise that all thinking has to be thinking about something – "thinking of any kind is always 'thinking about X'" (page 13). His conclusion surely does not follow? All driving and all flying has to be driving or flying some particular machine. But from this modest truth we are not entitled to infer the impossibility of schools of driving and of flying.

As useful preliminaries to a future definitive work I commend especially chapters which examine, and fail, first Edward de Bono and then both the Watson-Glazer Critical Thinking Appraisal and the Cornell Critical Thinking Tests. These widely employed exercises appear on the present showing to be breathtakingly bad. Watson-Glazer, for instance, "confuses the long-established distinction between a proposition, which may be true or false, and an inference, which may be valid or invalid" (page 132) (an indispensible distinction which – to the consternation of those using his texts for the instruction of the young – was not always observed by Descartes). Again, de Bono, who eschews all the scholarly apparatus "that would support any of his claims" (page 97) is shown to (try to) justify his recommended models and metaphors only by "committing the fallacy of Affirming the Consequent" (page 101).

My main dissatisfaction with *Critical Thinking and Education* begins with the fact that McPeck glimpses but then refuses to elaborate upon the resemblance between education in critical thinking and moral education. Thus, very early on, he notices that critical thinking is as much a matter of knowing how as of knowing that (page 11). Then, a little later, after indicating that resemblance he recognizes that there is little virtue in teaching the putative skill if you do not at the same time succeed in promoting its full employment (pages 14–19). To do that would – to take a comparatively trivial example – be rather like teaching children how to behave at table while lesying them still disposed to eat like Henry VIII!

In a final paragraph McPeck explains that he has omitted to consider such existential matters, partly because there is so much "confusion over the meaning of critical thinking", and partly because the problem of inculcating dispositions "involves many more empirical questions than I, as a philosopher, have the specific knowledge to treat" (page 162). No doubt he is right on both counts. Yet neither constitutes good or even any reason for refusing to bear constantly in mind one fundamental, awkward fact. By far the strongest inhibition on good thinking is the fear that it will support conclusions uncongenial to the thinker; just as, on other occasions and/or with other people, the strongest incentive is the corresponding hope that such thinking will generate conclusions which are acceptable. It is, therefore, possible to sustain a disposition to think critically only if and so long as your desire to get true answers is stronger than any possibly conflicting desires to hold fast to particular cherished positions.

At one point McPeck complains of the "touch of paranoia" afflicting books and courses offering coaching in informal logic; "as though mistakes in reasoning were always perpetrated by unscrupulous souls who are out to deceive" (pages 93–4). Fair and necessary comment. Nevertheless the shift of emphasis really required is: not so much to the possibilities of innocent error – although there is, in all conscience, plenty of that; but rather to the fallacies which we do not detect, the key questions which we do not raise, and the crucial distinctions which we do not make, either solely or largely because we have our own good reasons for not wanting to reach threatening conclusions.

It is a main contention of McPeck that there neither is nor could be a general skill of critical thinking applicable in all areas. Certainly no one will go very deep or far in their criticism in any particular area until and unless they have learnt a lot about that area. But McPeck appeals, with special reference to "the teaching of Latin", to the discrediting of claims about "a pervasive transfer of training across disciplinary boundaries" (page 14). This is irrelevant. For what has, apparently, been falsified is the claim that by first learning Latin we become better able to learn something altogether different. What has not been falsified, nor could be since it is true, is the more modest claim that by becoming better able to sort out bad thinking in one area we become to some extent better able to do exactly the same thing somewhere else.

This is in two ways important. First, it constitutes the chief and sufficient practical justification for undergraduate studies in disciplines which, though not designed as trainings for any one particular profession, do nevertheless demand little else but appraisals of evidence and argument: for instance, that professed by both author and reviewer, philosophy. Second, if the proposition really were false then there could be no sound, outside criticism of any of the agreed assumptions or alleged findings of the established experts in any field. I will, for once, forebear deploying examples showing both the possibility and the necessity of such independent criticism; today above all perhaps in education.

Antony Flew

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Plato's talking-points

An Introduction to Plato's Republic
by Julia Annas
Clarendon Press: Oxford University Press, £15.00 and £4.95
ISBN 0 19 827428 9 and 827429 7

Plato
by Robert W. Hall
Allen & Unwin, £10.95 and £4.95
ISBN 0 04 320145 8 and 320146 6

Both these books are written primarily for university students. Dr Annas's for philosophers, and Professor Hall's for political theorists.

Dr Annas competes with Cross and Woozley and with Nicholas White as a guide to the *Republic*: she is more up to date than the former, and more readable than the latter. On the whole she quite rightly treads well-worn paths, and as pure philosophy the result is admirable: she analyses the arguments with skill and usually with sympathy, and gives the student a clear idea of modern controversies without getting bogged down in them. Her book deserves to be widely read.

She is not always orthodox: on knowledge and existence and on the extent of the realm of forms she hold unusual views, and she dismisses the tenth book as an unsatisfactory coda in which the Myth of Er is a painful piece of vulgarity. Occasionally she is adventurous, claiming that it is in the United States that Plato's educational theory, with its emphasis on early social conformity and later original thought, is more nearly put into practice, and referring to Bertolucci's film *The Conformist* in connexion with the simile of the Cave.

Dr Annas's introduction concentrates so closely on the actual words of the *Republic* that some important background matters are neglected or misstated. It would help our understanding to consider why the work was written, and to know more about common Greek assumptions both to see what Plato took for granted, and to judge how much he reflected, and how much rejected, the views of his contemporaries. Thus we can ask: to what extent was the *Republic*, a dialogue intended to be read widely, a coherent statement of Plato's views, to what extent a set of talking-points? Was it as a whole concerned primarily with the question, "Why should I be just?" What bearing has the fact that Plato founded the Academy to train the future leaders of Greece on how seriously one should take his political programme? Did not Plato come into contact with political systems, and women, from many states which differed widely from Athens, so that his "revolutionary" views must be seen against that wider background? Is it not at least conceivable that there were religious, or even mystical, elements in Plato's thought, which a purely anthropocentric approach misses?

Much more serious than these omissions is a crime of commission, the denigration of Athens. It is described as "a populist democracy, with a clearly defined way of life separating those with power from those without, about as tolerant of openly expressed nonconformity as McCarthyite America". This debunking is all right for those who know all about Athens, but for those many students who do not it is unfair, not just to Athens, but to them. Of course the Athenians failed frequently to live up to their ideals, but if they had never expressed such ideals, the world would even now be a different place, and we should not forget it, or encourage others to do so.

Dr Annas is convinced that Plato attached no value "to *any* human life apart from the fulfilment of a social role for the common good . . . People are seen from a perspective which avowedly ignores everything which makes for individual and personal commitment". Professor Hall, who earlier wrote *Plato and the Individual*, takes a different view. The present work is said to be the first full-length study of Plato's political thought in English for over sixty years, but as such it is disappointing. After chapters on the Athenian democracy and the Sophists, much of the rest is mere summary of the *Republic* and the Laws, with some coverage of the *Politicus*, the *Protagoras*, and the *Gorgias*. There is also much rather opaque defensive argument to show that Plato was in fact very much concerned with the individual, and the result is neither exciting nor well-balanced as an introduction for the student. The free use of unitalicized Greek words without much explanation is unhelpful, and, in the case of *pleonexia*, idiosyncratic. Only eight lines are devoted to Plato's "Sicilian adventure", and states other than Athens are virtually ignored.

The final chapter, on Plato's political heritage, is mainly a history of the theory of natural law. It credits Plato with a large share of responsibility for the views of, among many others, Cicero and Aquinas, sadly admits that Burke was not much influenced by him, and even mentions the Ayatollah Khomeini, "a keen student of Greek philosophy". The medieval Arab interest in the *Republic* is however ignored, and the chapter fails to convey how frequently, throughout the ages, Plato has excited and stimulated men's thought.

Pamela Huby

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Hume's ideology

Philosophy and Ideology in Hume's Political Thought
by David Miller
Clarendon Press: Oxford University Press, £15.00
ISBN 0 19 824658 7

In this short book Dr Miller is concerned to offer a coherent account of Hume's social and political thought. His account is underpinned, as all such accounts are, by a specific conception of the nature and structure of political theory.

In his view political thought is constructed out of two different sets of beliefs, namely the philosophical and the ideological. Philosophy is concerned with second-order questions, mainly of the epistemological and meta-ethical kind, whereas ideology is concerned with substantive empirical and moral questions. In order to elucidate and explain any political structure, therefore, we should articulate its author's philosophy and ideology.

Miller applies this view to the analysis of Hume. He argues that as a philosopher Hume was concerned to construct a science of the human mind. The science rested on a specific theory of belief and judgment. For Hume a judgment or a belief is grounded neither in reason nor in sense-experience, but in the "natural workings of the imagination". Human beliefs cannot be rationally vindicated, for any attempt to do so ends in total scepticism. They can only be justified by showing that men cannot help making them, that they can be "derived" from the mode of operation of the imagination. This is Hume's "mitigated scepticism". Our beliefs and judgments can, no doubt, be improved, but we cannot hope to arrive at ones that are beyond doubt. Hume extended his epistemological analysis of belief to moral judgments and argued that they are grounded in imagination, are inherently undemonstrable and capable of improvement.

After a careful analysis of Hume's philosophy, Miller turns to his ideology. For Hume, according to Miller, men are neither egoists nor altruists but beings endowed with limited imagination and sympathy. They are jealous of their reputation and social standing, and have a desire to increase their wealth. They need to be restrained within the confines of the "artificial" virtue of justice by such means as love of reputation and fear of the sanctions of customs and laws.

According to Miller Hume's political theory follows logically from his philosophy and ideology. His philosophy "establishes the terms" in which he thinks about political life and determines the kinds of argument he finds persuasive. His ideology provides the concrete content of his political theory. Thus political authority is considered necessary because human imagination is weak and limited. The institution of property is grounded in his conception of man, and the structure of society in his views on the necessity of social hierarchy. Hume emphasizes the conventional character of all beliefs, and therefore rules out radical social change. And he insists on the inherent fragility of the virtues of justice and loyalty.

Dr Miller's analysis of Hume's philosophy is perceptive and contains important insights; and his elucidation of his ideology is persuasive. Miller's account of Hume, however, is not free of difficulties; he attributes to Hume a distinction between philosophy and ideology that is alien to his subject's thought, and never makes entirely clear in what the distinction consists and whether it can be sustained. Miller's view that ideology is historically grounded and that philosophy is not fails to carry conviction. And he fails to ask how philosophy and ideology interact and shape each other.

Bhikhu Parekh

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BOOKS

Wrongful execution

The Black Flag: a look back at the strange case of Nicola Sacco and Bartolomeo Vanzetti
by Brian Jackson
Routledge & Kegan Paul, £6.95
ISBN 0 7100 0897 X

Sacco and Vanzetti were arrested in 1920 for a particularly callous armed robbery and double murder in South Braintree, Massachusetts. They were both armed with pistols when arrested, and at the trial a ballistics expert seemed to connect the weapons with the murders. The case attracted little attention at first, and the convictions were not surprising. As appeal followed appeal, and when legal minds of the quality of Felix Frankfurter supported the defence, public opinion was roused. No legal case in the 1920s, save the kidnapping of the Lindbergh's baby, and anything like the impact of Sacco and Vanzetti, and it is a matter of liberal faith in America to this day that both men were innocent of the charges against them, and that they were wrongfully convicted and executed.

Brian Jackson is the first English writer to write a book on the case. Though not legally trained, he deftly analyses the strategies of prosecution and defence, the conflict of evidence, lacunae in the case (no mention seems to have been made of the thousands of dollars stolen in the armed robbery which disappeared without trace), and the personalities of the principal figures. As a sociologist, Jackson makes the very interesting point that the defendants were, in the eyes of the community, guilty of "cultural crime". He rejects the idea that there was a conspiracy against Sacco and Vanzetti. A pervasive anti-Italian prejudice in Massachusetts was compounded by a deeply-rooted hostility in the postwar atmosphere to reds, radicals and anarchists. To Jackson this constitutes a cultural "blind-spot". While the president of Harvard College, A. Lawrence Lowell, on examining the trial to see if there had been any miscarriage of justice, saw nothing but the orderly precedures of the law, Felix Frankfurter, a distinguished lawyer on the Harvard faculty, virtually destroyed the credibility of the verdict using the same evidence. The case presents a conflict of *mentalités* which cannot simply be restricted to narrow questions of law and procedure. Nevertheless Sacco and Vanzetti were convicted and executed on specific matters of law, notably the reliability of eye-witnesses, the conflicting testimony of ballistics experts, and the dubious demonstration of a "consciousness of guilt" by the prosecution. Jackson prints extensive extracts from the cross-examination, which, perhaps more than anything else, gives the atmosphere of the trial:

Katzmann: Did you say yesterday you love a free country?
Sacco: Yes, sir.
Katzmann: Did you love this country in the month of May 1917?
Sacco: I did not say – I don't want to say I did not love this country.
Katzmann: Do you understand the question?
Sacco: Yes.
Katzmann: Then will you please answer it?
Sacco: I can't answer in one word . . .
Katzmann: Did you love this country in the last week of May 1917?
Sacco: That is pretty hard for me to say in one word, Mr Katzmann.
Katzmann: There are two words you can use, Mr Sacco, yes or no. Which one is it?
Sacco: Yes.
Katzmann: And in order to show your love for this United States of America when she was about to call upon you to become a soldier you ran away to Mexico?

The defence objected until it was blue in the face to this devastating and prejudicial cross-examination, but Judge Thayer allowed it, and by Massachusetts law in the 1920s it was the same judge to whom all appeals were directed concerning the conduct of the trial.

Jackson has not attempted to write a full account of the wider ramifications of the case. His conclusion, that the prosecution did not prove the charge, would command general assent; but it is hard not to feel that the full meaning of the case lies in the myriad filiations which reached out from the two anarchists in prison to their defence committee, the changing public attitude, and the bitter divisions within families and communities which the case revealed. A leading scholar of American puritanism was given the name "Sacvan" in memory of the anarchist martyrs. Emma Goldman, denied entry to the United States, organized a protest meeting in Toronto (which raised $51), and wrote to her fellow-anarchist Alexander Berkman:

> I cannot tell you how utterly wretched I have been these weeks. Our whole life and all we did stood out with such force it just robbed me of all peace of mind. The horrible feeling of futility, if now after forty years of so-called advancement [since the execution of the Hnymarket martyrs] Sacco and Vanzetti will be sent to their death by such rank prejudice as was displayed by [Judge] Thayer. At least one great writer, John Dos Passos, was propelled into a brief, searing career as a radical as a direct result of the case. Writing in the final volume of *USA*, Dos Passos saw in the fate of Sacco and Vanzetti the crisis of his own life as a writer. In Camera Eye 49 he described the
>
> pencil scrawls in my notebook the scraps of recollection the broken halfphrases the effort to intersect word with word to dovetail clause with clause to rebuild out of mangled memories unshakably (Old Pontius Pilate) the truth . . .
>
> rebuild the ruined words worn slimy in the mouths of lawyers districtattorneys collegepresidents judges without the old words the immigrants haters of oppression brought to Plymouth how can you know who are your betrayers America
>
> or that this fishpeddler you have in Charlestown Jail is one of your founders Massachusetts?

Eric Homberger

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Shock or harm?

Obscenity and Film Censorship: an abridgement of the Williams Report edited by Bernard Williams
Cambridge University Press, £12.50 and £4.95
ISBN 0 521 24267 3 and 28565 8

Two years ago, in the autumn of 1979, the Williams Report on Obscenity and Film Censorship appeared. Unlike most government sponsored documents it was hailed by many as a masterpiece of intelligence and lucidity. But others saw it as a whitewash and the feeling grew that the report was a ghastly libertarian document. Mrs Whitehouse urged people to bombard the Home Secretary with objections to its proposals while the Mock Turtle in the form of Ronald Butt shed copious tears in *The Times* over the post-Williams world as he saw it where pornography would finally triumph with official approval.

Whether or not it was their efforts which caused the report (like others before it) to moulder on the ministerial shelf is a matter for speculation, but there it remains. As if to remind us of its bookish rather than practical merits it now appears between hard covers in an abridged form directed, alas, at the general reader rather than the legislator. Does the report represent a sensible way of reforming the absurd laws of obscenity in this country or is it, as suggested by Whitehouse, Butt *et al*, a pernicious document that gives the pornographer complete carte blanche?

When it comes to dealing with public morals the law has an unhappy history. Over the years various legal measures have emerged to deal with such things as obscenity and blasphemy and they are all unsatisfactory. The definition of obscenity – that which "depraves and corrupts" – first appeared in 1868. It was adopted more or less unchanged by the 1959 Obscene Publications Act and remains in force to this day. But no guidelines are given in that Act about what constitutes depravity and corruption. Evidence has been hard to come by and even then it was decided in a 1972 case that behavioural manifestations of depravity were not the point. It was enough that the *mind* of the consumer of pornography should be debased.

One does not have to be Gilbert Ryle to encounter philosophical difficulties in deciding what is going on in other people's minds. In the absence of hard evidence to show that people have been harmed juries will acquit even the most extreme material. Professor Williams and his colleagues, painstakingly analysed the research conducted on the effects of pornography for the purpose of the report and they come to the not surprising conclusion that it is impossible to prove causal connexions between it and anti-social behaviour, least of all sex crimes. They rightly point out the difficulties involved in setting up the appropriate clinical venues for tests of this kind, but even those that have been attempted are inconclusive. Taking as an implicit assumption the view that law should be based on certainty, the committee found it impossible to come to any satisfactory conclusion about the effects of pornography. It is this more than anything else that aroused the wrath of the Whitehouse brigade.

What the committee did feel certain about was that this sort of material causes public offence when it is prominently and publicly displayed. Therefore they suggested abandoning the deprave and corrupt test, with its assumption that harm must be demonstrated, for one that involves causing offence to "ordinary reasonable people". Why this should be so objectionable to the anti-Williams lobby is hard to see. On the face of it, jurors will find it easier to convict pornography using this test.

Those hostile to the report were also appalled by the proposal for a new distinction to be drawn between restricted and prohibited material. The latter, material depicting children and real (rather than seemingly simulated) acts of violence, would be completely banned. Restricted material would extend to homosexual acts and buggery, and would be available in specially licenced premises. Crusaders like the Chief Constable of Manchester felt that allowing pornography to thrive in any setting would be against the duties imposed on police officers. But since his reign in Manchester began the police have complained that continually pursuing pornographers only serves to drive them underground and thus make them less easy to keep under surveillance.

All in all the report is marked by a sense of reality and an intelligent appraisal of how the law works. Many of its proposals, like those dealing with the restriction of pornographic material and the concentration on public display are sensible and workable. But I do find it strange for the committee to suggest that the printed word should be exempt from any legal restraints, although one can see that it logically follows from the shock rather than harm concept that informs their conclusions. However, it is sadly not the case that all pornography is pictures. Many of the worst examples are between the covers of what are called in the trade "readers" – nasty little tales that very often encompass everything from sex with children to rape and brutality. At the moment such books are sold "under the counter" but if the Williams report ever became law they could be available at the local newsagents. Funnily enough, juries convict these books more readily that pictorial matter.

It must be arguable that the effect of the printed word – the fact that the reader can linger over it, return to it, savour it – is offensive without needing to resort to clinical proof. No change in the law that does not encompass this sort of material will have any effect at all. It is the fatal flaw in the Williams report, a conclusion reached from the best Millian principles, but one that does add some substance to the criticisms levelled at its potentially harmful libertarian tendencies.

Christine Verity

Christine Verity is a barrister.

Copybook decline

Ghana 1957–1966: the politics of institutional dualism
by Benjamin Amonoo
Allen & Unwin, £15.00 and £4.50
ISBN 004 320147 4 and 320148 2

"Wheresoever the carcass is, there will the eagles be gathered." The search for what has gone wrong in independent Africa leads with inexorable morbidity to Ghana. Only Uganda – and then with much more evident excuse – presents a more depressing story of failure. Nor is it unfair that this search should concentrate on Nkrumah's nine years in power, though the paucity of material on post-Nkrumah Ghana badly needs remedy. Subsequent regimes, whether military or civilian, whether claiming to espouse Nkrumah's legacy or to reject it, have in their strug-

BOOKS

Consumer durables

The Meaning of Things: domestic symbols and the self
by Mihaly Csikszentmihalyi and Eugene Rochberg-Halton
Cambridge University Press, £20.00
ISBN 0 521 23919 2

It is a common enough observation that people are attached to some of their possessions, as witnessed by the loving care so often lavished upon motor cars. It is to this relationship between people and material objects that this book is addressed. Certainly, there is a gap in the literature to be filled, since few seem to have concerned themselves with this phenomenon. Unfortunately, this sound, if modest, undertaking is swamped by the extravagant, unsubstantiated and self-indulgent theorizing of the authors, so that what there is of merit virtually disappears from sight.

The first chapter maintains a precarious balance between insight and mystification as the authors seek to develop certain basic concepts. The nature of one's self, they argue, does not lie in its origins, but in the goals that one pursues, the fulfilment of which cultivates the kind of person one is. Objects play a part in this "cultivation" because in their concrete permanence they embody experiences which testify to the kind of people we are, so that it is possible to gain an impression of a person from simply walking into his home. Other objects are even more essential to the nature of the self; for example, it is through manipulating tools that a person *becomes* a craftsman.

The precarious balance of the first chapter is soon destroyed by an orgy of extravagant theorizing and concept-mongering in the second. Apparently concerned about the sociological respectability of their enterprise, the authors engage in that most uninformative of sociological practices, intellectual necrophilia: they exhume the corpses of sundry founding fathers and dust them down in a laboured effort to reveal that somewhere in the writings of these venerable relics there just might be justification for their research.

Encumbered with all this theoretical baggage, the authors now embark upon reporting the results of their survey of middle and upper-middle class residents of Chicago. Fortunately, these good people are ignorant of the authors' extravagant theories and, therefore, keep intruding common sense into the discussion. When asked what objects they cherish most, the majority reply "furniture" and when asked why they cherish certain objects, they say because of the enjoyment they give or the memories they evoke.

Undaunted, the authors heap speculation upon speculation in an effort to convince the reader that all this is more significant than it appears. However, since the data are wholly descriptive and contain little that calls for explanation, the only significance the authors can give their findings is by assuming their earlier theorizing to be true *a priori* and then trying to fit the evidence in. The fact that the data simply cannot bear the weight of this theorizing does not deter them. Hence, we are told that "to own furniture, again like owning other objects, means to possess other people's psychic activity".

Not content with appending all this theoretical extravagance to their mundane observations, in the later chapters the authors begin to infuse into people's responses to interview questions their own unwarranted interpretations of what respondents actually meant. This is most apparent in the distinction they draw between "warm" families, whose members have a positive attachment to their homes, and "cool" families, whose members have a neutral or negative attitude. The authors obviously approve of "warm" families, since even when behavioural differences are absent, as in their equal desire to travel away from home given the chance, they gratuitously interpret the reasons given by "warm" families as "productive", but those given by "cool" families as "escapist".

This interpretative licence gives their theoretical speculations free rein, since even when the theory does not accord with their observations, they can simply blame the respondents. Thus, having waxed lyrical about the aesthetic appreciation of art objects, they report that precious few people have any such appreciation, merely valuing art objects for the memories they evoke. Unabashed, they simply denigrate the vast majority of their sample for being heathens and parade a pompous pseudo-intellectual as the epitome of aesthetic sensitivity.

In short, this must be a strong candidate for the award of "Most Eminently Forgettable Book of 1981".

P. A. J. Waddington

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Care and cure

Social Work and General Medical Practice: collaboration or conflict?
by June Huntington
Allen & Unwin, £12.50 and £5.95
ISBN 0 04 360059 X and 360060 3

June Huntington's book is an important contribution to our understanding of why our different social services, despite a plethora of co-ordinating committees, remain badly fragmented.

In this study of relations between social work and general practice, she argues that there are major differences between the "occupational cultures" of these two professions which make strained relationships and misunderstandings all too likely. By the term "occupational cultures" she refers to each group's view of and approach to its work; to its clients and their problems; to society and the group's place within it. Most of the book consists of a detailed exploration of the many and often significant differences that exist between them on these fundamental issues and of the ways these can affect their relationships with each other. For instance, doctors tend to make clear, authoritative decisions, arrived at without delay, while social workers tend to treat decisions as provisional until there has been time to fully explore the circumstances, and to let the situation develop.

The section on occupational cultures is preceded by a section discussing what the author calls "occupational structures". Here she draws attention to significant differences in the age, sex and marital distribution of the membership of each occupation, as well as the kinds of setting they work in, the sources of their income, and the types of client they attract. These differences, she argues, affect the images and expectations each has of the other and hence relate directly to some of the differences in occupational culture that she goes on to discuss. For example, GPs are more likely to be male, older and married, and this is clearly a factor in the scepticism they sometimes express about social work. She is aware that there are important differences within both social work and general practice, and develops an interesting typology for each which she uses to discuss the circumstances in which reasonably harmonious cooperation is most likely to occur and in which the sparks are likely to fly, as, for example, when a doctor with a narrow concern with physical medicine encounters a radical social worker who is centrally concerned with reducing social inequality.

Although June Huntington clearly is aware of the importance of the wider social structures (the National Health Service, for example) within which both social work and general practice are embedded, she only deals with these in passing in her exploration of occupational cultures. Yet they constrain individual professionals, establish power differentials and at times generate direct conflicts of interests, over the control of resources for instance. The case-loads and priorities of individual social workers are determined as much by bureaucratic and political considerations as by the values of their occupational culture. These features of inter-professional relations need disentangling more clearly from the idea of occupational culture and they need more detailed attention in their own right than Huntington has given them.

While this is an omission, her discussion of solutions to the problem which she has so cogently analysed is a disappointment. She clearly hopes that her analysis will have practical use but produces little beyond pious platitudes. Bringing each group's culture out into the open, she suggests, will aid mutual understanding and hence make collaboration easier. Would that it were so simple! We shall need to work out in detail ways of restructuring professional education as well as of ensuring that what is learnt is not lost in the exigencies of the everyday world of work. Otherwise this hope is unlikely to be translated into real change.

Despite these limitations, this thought-provoking book does contribute to our understanding of the difficulties which beset the achievement of genuine cooperation between the professions. It ought to be read by everyone concerned to provide a more effective service.

Tim Robinson

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Saying no

Realism: an essay on interpretation and social reality
by David Levy
Carcanet, £7.95
ISBN 0 85635 300 0

During the student troubles I had a brilliant student who sported a badge which said "No". I never tried to break his enigmatic cover. There were several of them. They were the real underground of that time, and they had to think very hard and privately.

I do not know whether David Levy was one such, but his book embodies an autonomous, questioning search for alternative traditions, which in his case are found in such thinkers as Ricoeur, Vivas, Eliade, Jonas, and – above all – Voegelin. He holds, for example, to the kind of notion of a human nature proposed by Jonas. Beneath the variable particularity of time and culture lie, not only biological constants, but the steady relation which all human artefacts must bear to tool, to image and to tomb. Language, the most distinctively human attribute, is engendered both out of historical and cultural uniqueness and out of a shared reality.

David Levy speaks most clearly to the scandal of the sociological condition when he refuses to side either with the collectors of empirical "facts" or with those exponents of critical sociology who exude a "cloudy universal suspicion which treats every human thought as an example of false consciousness and every institution as a deforming cast upon the body of mankind". The realism which he defends is indicated when he defines sociology as "critical clarification of what is involved in building and maintaining a civilization in the face of the pressures of reality". For that task he proposes no single model of knowledge but levels of discourse specific to their objects and objectives. We have to ignore the various prohibitions against ontology and to engage in a "restorative" rather than a suspicious hermeneutics. This requires an examination of the sociological masters of suspicion, the virtuosi of false consciousness, like Freud, Marx and Nietzsche.

Levy's key chapter deals with these masters, in particular Marx, for whom "ontology is swallowed up in history and epistemology in a critical sociology of knowledge". When the optimistic revolutionary transcendence of real limitations does not occur at the time and place appointed the frustrated revolutionaries have to blame the operation of a pervasive cultural hegemony, on the model of Gramsci and the Frankfurt School. In Horkheimer speculative and practical reason, which were the agencies of progress in Marx and Hegel, themselves partake in the process of distortion. Adorno concludes that every effort to comprehend reality, whether conceived as an immutable order of being or an intelligible process of history, is a species of idealism, imposing systematic categories of the mind on the concrete irrationality of the real. This comprehensive suspicion ends in political quietism, which is why Adorno and Horkheimer stood aside from a student left that was enthusiastically deploying their own suspicious style. David Levy concludes that in these thinkers "the metastatic project of Marxism became conscious of its futility in a world it does not recognize as ultimately real but which obstinately refuses to disappear".

The disappointed radicals hunt for the obstructive demon, which Horkheimer and Adorno located in human enlightenment itself. Hence, according to David Levy, the need for realism, that is, a lesson in modesty, a recognition of the ontological chasm between intention and achievement, and of the meaning of contingency and finitude. Otherwise, the utopian thrust has to disguise its failure in the comprehensive cover-up provided by totalitarian socialization. This, near the end of the book, is perhaps the real point of departure and the source of the "No" which David Levy wears as his philosophical badge.

His "Yes" is to the discovery of the contours of existence by analysing the variety of symbolic expressions which are man's creative reaction to being in the world. This is a prolegomenon to a sociology of symbol and culture which is not reductionist or all-embracingly "suspicious", nor lost in spurious creative autonomy and baseless fantasy. He also concludes that "the tension between realist and idealist accounts of social reality must be resolved in an ontology which admits the effective reality of the relatively independent realm of ideas, while not forgetting the essential dependence of the thought upon the thinker and the thinker upon the world".

Reviewing a book in this way is to cull fragments from an argument which only makes proper sense when read carefully from beginning to end, and which is precisely about beginning and ending, finitude and horizon. David Levy has written a learned, subtle and important book which builds up conclusions powerfully and incrementally. It cannot be reviewed but it ought to be read.

David Martin

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When cows come home

Sacred Cows, Sacred Places: origins and survivals of animal homes in India
by Deryck O. Lodrick
University of California Press, £20.00
ISBN 0 520 04109 7

This is more than just another contribution to the still-raging debate on the "sacred cow" of India. The cultural-materialist side of that debate has been chiefly represented by Marvin Harris, who has boldly argued that Indian attitudes towards the zebu cow are best explained by ecological and economic factors, with the well known religious rites and beliefs associated with that animal being no more than epiphenomena.

The case of the sacred cow is clearly crucial for any theory that pretends, as Harris's does, to universality. Lodrick's book should finally scotch that pretension. But his careful, scholarly and admirably concise discussion does much more than establish a point that many assumed to be self-evident: that Hindu attitudes to the cow are essentially religious in origin and function. It also raises the debate to a new level of significance by including the institutional dimension, the homes for cows and other animals, which has so far been – astonishingly – overlooked. It is almost as though one had a sociology of Christianity that ignored the Church.

The *pinjarapoles* are animal homes of Jain origin which care for cattle and other domestic beasts but which also, inspired by the distinctively Jain emphasis on *ahimsa*, "non-harmfulness", take in other animals, including wild beasts, birds, and insects. There is a famous *pinjarapole* in Old Delhi which is devoted entirely to the care of sick and injured birds. In Ahmedabad Jaina housewives regularly leave out domestic scourings assumed to contain insects which are taken away and deposited in a special room in the local animal home. *Goshalas* are specifically Hindu institutions that derive their inspiration from the story of Krishna and are the special sites of *gopi/d* cow worship. A large proportion of the animals in a sample of 25 *goshalas* surveyed by Lodrick were economically useless. As one man explained:

> One does not . . . kill one's mother once her useful life is over and she can no longer contribute anything to the household. Even so with Mother Cow – she gives us life through her milk and is a tender and faithful companion.

Although both types of animal home are to be found throughout India, by far the densest concentrations occur in the north and west, particularly in Gujerat, Rajasthan, Haryana, the Punjab, and western Uttar Pradesh. Lodrick believes *pinjarapoles* have been spread through the subcontinent by Jain merchants who have migrated from their Gujerati homeland. *Goshalas* have a distinct, if still somewhat obscure, history of their own. The preservation of unproductive cattle appears to date from the fourth century BC, judging by evidence in the writings of Kautilya. The appearance of the cattle refuge as an institution can be roughly dated to somewhere in the following two centuries, according to Lodrick. The doctrine of the sanctity of the cow, though seemingly without clear justification in the Vedic scriptures, is inextricably associated with the emergence and diffusion of the cult of Krishna from the first century AD. This cult has long been identified with the Vaisya *varna* of the Hindu caste system: the traders, merchants, and farmers. It is the members of these groups who have fostered and maintained the *goshala* cattle home from early times to the present.

In recent years the Indian Government has sought to modernize *goshalas* and *pinjarapoles* by encouraging their conversion to scientific methods of cattle breeding and milk production. These measures, promulgated under successive Five Year Plans, appear to have met with little success, partly through undercapitalization, but also because of the persisting presence of many "useless" cattle in both types of institution. The official apostles of economic rationalization in India have so far come off second best in the confrontation with Krishna.

Lodrick's verdict is that the animal homes of India are "complex institutions that reflect the interaction of forces and processes that have been at work in the Indian subcontinent for hundreds of years. They fulfil social and religious functions as well as economic ones . . ." (page 203). The conclusion is supported by ample statistical evidence. Earlier, in the historical part of his book, Lodrick raises interesting questions about the political and ideological significance of the cult of the sacred cow that merit further development. It is to be hoped that he will continue to mine this rich vein of sociological inquiry.

Roy Willis

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BOOKS

Gas at a peep

A History of the British Gas Industry
by Trevor I. Williams
Oxford University Press, £18.50
ISBN 0 19 858 157 2

Gas, as the Chairman of British Gas remarks in the foreword to this book, is the Cinderella of the British energy industries. The discovery of North Sea gas revolutionized the former dull and declining town gas image, but this has yet to be reflected in the literature on the industry's history. Oil and even coal have attracted a horde of journalists, historians and economists, but the literature on the history of the gas industry has remained meagre and drab.

This is a pity, for the story of gas is both important and interesting. The first gas company was formed in London in 1812. Gas lighting spread rapidly over Britain, revolutionizing hours and forms of work, play and travel wherever it became established. By the mid-1920s few English towns of more than 10,000 inhabitants were without it. Nor did the industry settle down to a dull middle age after the initial youthful expansion. During the course of the nineteenth century British gasmen waged an evangelistic campaign abroad. One company established in 1824 built and operated gas works all over the Continent: a pioneer, and long-forgotten, multinational company. Moreover, technological, economic and political changes continued to cheer up the industry's history right down to the dramatic changes in the industry's structure after the discovery of North Sea gas in 1965.

Sadly, Dr Williams is no fairy godfather. There are few new, and even fewer, exciting insights into the history of gas in this book. As a business history, this type of study is out of date. In recent years a number of enlightened public and private sector companies, such as the Electricity Council, ICI and Courtaulds, have commissioned histories of their organizations. These studies have been based on full access to relevant archives, which the historian of the company has been allowed to study with full scholarly objectivity. Dr Williams's book is a reversion to an older format. There are nice illustrations, a cheerful style, an absence of controversy, and a complete reliance on secondary sources. The few pieces of research based on the industry's rich archives which have been published in recent years are ignored. Moreover, the book is heavily biased towards the very recent past. Only a quarter of the work is devoted to the nineteenth century. Matters such as the enormous social repercussions of the spread of gas lighting in the early nineteenth century or the growth of municipal gas undertakings after 1850 receive scant attention.

Dr Williams is keen to emphasize the importance of the scientific and engineering aspects of the gas industry's history, too often neglected by historians "still recruited largely from the arts departments of universities" (page ix). This is a perfectly respectable aim, yet even here the book is only partially successful. While sections of the text are too "technical" to appeal to the general reader, they are also superficial to contribute to specialist knowledge. More seriously, the book is less a history of the gas industry seen through a technological perspective, than the attempt by a historian of technology to write amateur economic and social history. The result is a series of inane, common sense observations on both the history of the gas industry and the British economy in general. The bland assertion that the British economy lost ground to foreign competitors in the late nineteenth century largely because "[engineers] fully realised the value of technical education while Britain [did] not" (page 45) is commonplace history.

Over half of the book is devoted to the gas industry since nationalization. The history of gas in this period raises many important questions, such as the Government's relations with the nationalized industries, and the relative efficiency of public sector industry. Unfortunately, Dr Williams has nothing original to say on such matters. It would surely have been preferable to maintain a dignified silence than to resort to such meaningless observations as "generally speaking nobody is the gainer from artificial rigging of the economy in response to political expediency" (page 206).

In short, this book is a piece of up-market journalism, more thoughtful and informative than most of that genre, and correspondingly less entertaining. There remains a great need for an authoritative study of the economic, social and technological history of the British gas industry.

Geoffrey Jones

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Jacobean disorders

Mystical Bedlam: madness, anxiety, and healing in seventeenth-century England
by Michael MacDonald
Cambridge University Press, £27.50
ISBN 0 521 23170 1

For the past fifteen years, historians of insanity have lived in the shadow of Foucault's *Madness and Civilization*, which for all its insights, contains relatively little information about mad people of the Renaissance or those around them. It is strong on broad sweeps and ideological statements, weak on the detail of how insanity was actually interpreted or handled then. Michael MacDonald says he has no aspirations to rewrite Foucault, but his approach to the subject is entirely antithetical – from everyday details to general principles. That is a very useful corrective.

How surprising that the Ashmolean Museum should contain 60 volumes of the case-notes of a Jacobean Dr Finlay, and how lucky the author to be the first to dig up this buried treasure. Richard Napier was an Oxford don, learned in theology, alchemy and medicine (both astrological and orthodox) who reluctantly left in 1590 to become rector of a tiny village in north Buckinghamshire. A disciple of the better known Simon Forman, he was ill-suited to the cure of souls, but clearly a natural physician, and pursued an extensive practice there up to 1634, seeing an average of ten patients daily. His case-histories were meticulous, and it is this detail which provides the specially valuable material for MacDonald's study.

About 2,000 patients described symptoms which indicate some form of psychiatric disorder; most were in the age-group 20–39, which is remarkable, since the age-structure of the English population then was the same as a developing country today. But death in young people was so common that taking them to a doctor may rarely have seemed worthwhile. In terms of social class the patients were a fair cross-section of the rural population, and although Napier's reputation brought him a number of aristocratic clients, his fees were modest. At least one case of mental disorder is recorded from 60 per cent of the small towns and villages within a day's walk of his practice, and many more must have gone to other physicians. Psychiatric illness was therefore an everyday feature of rural life.

Medical astrologers like Napier believed they could manipulate the forces of nature and detect the influence of malevolent spirits, but all physicians of the time aimed to heal patients' minds and bodies by restoring the harmony of these with the natural order. There can be little doubt that these aspirations were attractive to sick people, and that they had a powerful placebo effect. For both doctor and patient, there was no essential incompatibility between the different worldviews of magic, religion and science; they simply existed alongside each other, particularly at this time of great intellectual, religious and social change. In the same way, many modern psychiatrists view patients through psychodynamic and organic models at the same time.

As an Anglican, Napier was opposed to formal exorcism, but readily dispensed amulets, and MacDonald must be right in suggesting that "the victims of vaguely defined illnesses and chronic fearfulness sometimes felt better" as a result of these charms. Of Napier's prescriptions, only opiates had a specific pharmacological action on psychiatric illness, but most patients also received the orthodox purging and bleeding to expel noxious humours, and many must have been weakened as a result. Almost certainly, however, it was his rapport with people – perhaps related to his interest in the details of their lives – which made him such an acclaimed physician. He added a fairly directive form of supportive psychotherapy, usually encouraging patients to make the best of things.

Seventeenth-century Buckinghamshire was no Arcadia. Over 500 of the patients thought they were bewitched, but usually as extensions of personal hatreds or family feuds, which were unavoidable in small communities. Both Napier and his patients accepted that the everyday misfortunes of life, as well as supernatural events, affected all aspects of their health. Although good relationships with neighbours were very important for psychological security, the focus of these peoples' lives and their source of emotional support was the nuclear family. The stresses they reported were much the same as today – debts, redundancy (from enclosures), marital conflict, unrequited love, bereavement. Although aristocratic marriages might "suggest corporate mergers", for most of the population, courtship was simply a matter of boy meets girl, Shakespeare's portrayal of it receiving much support from these histories.

MacDonald steers clear of modern psychiatric diagnoses, but many of his patients who reported religious torments and despair of salvation almost certainly had severe depressive illnesses. In contrasting this period with the next century, he overestimates the degree to which the insane were then institutionalized – as others do. However, his book is a very significant contribution to the history of psychiatry, and if only more of the text had the panache of the preface, it would be a worthy contender to Foucault's.

Hugh Freeman

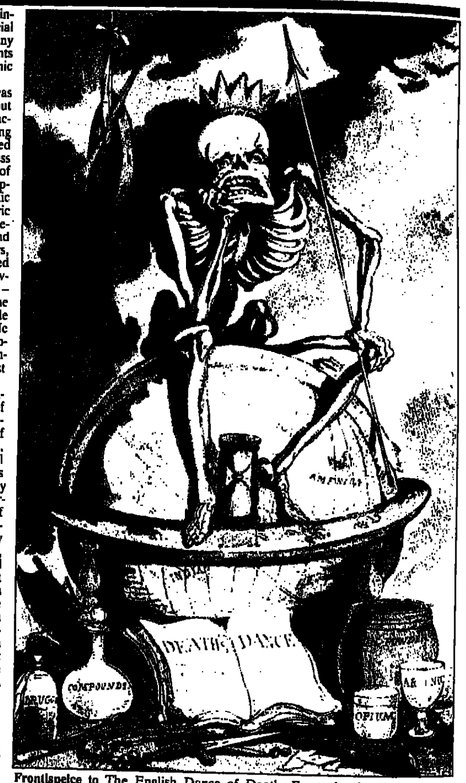
Hugh Freeman is senior consultant psychiatrist at Hope Hospital, Salford, and an honorary lecturer at the Universities of Manchester and Salford.

Scavengers or hunters

Bones: Ancient Man and Modern Myths
by Lewis R. Binford
Academic Press, £24.20
ISBN 0 12 1000 35 4

There is something about bones which seems to provide a morbid interest for all of us. They are frequent finds on sites ranging from the early times of our fossil hominid ancestors to the medieval period, and so are regularly investigated in archaeology. If, however, you want to find out about the greatly expanding horizons of skeletal studies, then this isn't the book for you. It is really about one aspect of bones; namely, what do they mean in terms of food-getting and especially meat eating.

It is likely that one or other primate species has been interested in meat eating at all stages of the evolution of this group over the past 30 million years, but in archaeology interest never fades. Much of this archaeological debate over the years has been of dubious quality, with claims and interpretations going wildly beyond the actual information on the material studied. Binford would call these established claims "myth", while I would see it as "imaginative reconstruction", hybrids between testable theory and novel speculation. Ignoring the fact that much of present archaeology falls into this category, Binford makes it clear that he is against myth-building but is in favour of creative theorizing based on good methodology and with an opportunity for further testing in the future.



Frontispeice to The English Dance of Death. Engraving by Thomas Rowlandson (1816).

Binford himself is something of a myth in archaeology. Seen as part of a "new archaeology" movement, he has quite a following on both sides of the Atlantic. The fact that there isn't really a new archaeology, just a revamped old archaeology hasn't been discovered yet.

Another archaeological myth may be involved here: namely that size (and amount of information) is linked with excellence or importance. Thus, 100 pages are given to the varieties of marks (man-made and otherwise) which can occur on bone. This is not an exhaustive survey even then, but is put to work to evaluate skeletal assemblages from very different localities, including Olduvai Gorge. Illustrations are good to fogbound, but on the whole provide a good reference series. In any case, this seems to be his contribution to a "robust methodology" for bones, and he certainly applies it trustingly. Unfortunately, his conclusions seem to work against his own wish to see archaeology operating more and more as a science.

In science, it is surely not correct to refer to a haphazard collection of food bones (of one or more species) as "faunal remains". The actual fauna of Olduvai and other sites is very different to the restricted number of species found at such sites. There is also the fact that some primates are really specialists in killing and eating *small* vertebrates. But would any small bones remain and preserve, and how often? For that matter, how do we define omnivore in relation to the evolution of human dietary changes: meat and veg as a daily pattern? It seems to me that we need to consider not only balanced diets but balanced interpretations here. The preservation and occurrence of food remains is greatly influenced by chance, and to believe that food debris can accurately reflect diet is to create another myth.

A major issue, which has developed in relation to the bone evidence, is that of the evolution of hunting strategies in Man. From the bone evidence, Binford concludes that the early hominids were adapted to scavenging, humbly moving in on the kills of larger mammals by carnivores. Indeed, he argues that organized hunting is more likely to have evolved as an adaptive strategy when more advanced hominids emerged beyond Africa. This is a challenging speculation which will no doubt spark off further investigation. Perhaps we should at the same time ask why we have been so concerned about investigating Man as a hunter, what we mean by hunting, and what its relevance has ever been beyond the explorer-tourist phenomenon of the past hundred years.

Considering that the book is about old bones, Binford produces a stimulating, if lengthy, evaluation of some aspects of osteoarchaeology. It is not, however, altogether an accurate representation of what others are doing, thinking and contributing to the subject.

Don Brothwell

Don Brothwell is senior lecturer at the Institute of Archaeology, University of London.

A collection of papers on *The Archaeology of Death* has been edited by Robert Chapman, Ian Kinnes and Klavs Randsborg, and published by Cambridge University Press at £17.50. Bringing together new studies on the disposal of the dead, the volume presents critical appraisals of current theory about social organization and culture change based on the remains of death and burial. It contains case-studies from North America and Europe, and themes include the complex social factors behind burial in monuments and cemeteries, the relationship between status, diet, disease and mortality, the use of differential burial practices to define rank, and the underlying reasons for major changes in burial patterns.

BOOKS

No more pea-soupers

The Politics of Clean Air
by Eric Ashby and Mary Anderson
Clarendon Press: Oxford University Press, £15.00
ISBN 0 19 858330 3

One of my first public appearances as the third chairman of the Royal Commission on Environmental Pollution was to attend the 1976 celebrations that marked 21 years of clean air in the City of London. This suddenly made me aware that my children – the eldest of whom was 19 years old – had never seen a pea-soup fog. Shortly after, I revisited Sheffield, which I remembered from my student days as a grimy, smoke-filled place in which a white shirt remained white for only a few hours: it seems to bear little relation to the clean bright city that Sheffield is now. What had brought about the profound changes of which these are but trivial examples?

In their admirably concise and splendidly readable account of the events that ultimately led to the Clean Air Act of 1956, Lord Ashby and Mary Anderson tell us. But theirs is no mere historical sketch: this book is about the *politics* of clean air, and rightly emphasizes that the perception of polluted air as a hazard to society, society's resolve to take action, and the evolution of effective means to implement that resolve, are complex phenomena that, at almost every turn, depend upon the ripeness of time.

Achievement of clean air took well over 300 years, since sea-coal displaced charcoal as major fuel and manufacturing industry began to predominate over agriculture as the major means of livelihood. It involved the recognition that the invisible gases that were evolved from (mainly) alkali works were indubitably harmful to plants, animals and buildings; that they could be largely prevented from emerging into the air by fairly simple means; and that the amounts that still escaped could be measured. It was thus not too difficult for central government to accept that these environmental hazards should be abated, and to take steps to do so.

However, no such ready agreement was obtained on what to do about smoke, which poured not only from industrial but also from millions of domestic chimneys: attempts to interfere with the Englishman's right to poke his companionable fire were hotly resented. There was also no general conviction that smoke was anything more than a nuisance: it took an estimated 4,000 deaths, after the great London smog of December 1952, to convince the public that smoke was a killer. It is, therefore, not surprising that the history of Parliament is littered with Smoke Abatement Bills; one must particularly admire the persistence of Lord Strathedon and Campbell who, between 1884 and 1892, unsuccessfully presented a bill to abate smoke in London on no fewer than ten occasions and, in his will, left it to the Duke of Westminster to continue these attempts.

Moreover, since there was no easy means of measuring smoke, it was difficult to determine that an offence had indeed been committed. This, for example, gave rise to the dismissal in 1907 of an action against the emission of black smoke from a power station, on the grounds that the smoke was not really black, but only dark brown! The history of smoke abatement suggests that it is too simple to assume, as Enoch Powell did in 1955, that "as soon as avoidance and prevention became practicable, that evil is definiad and a prohibition imposed upon it by legislation."

In addition to elucidating the factors that led to current British policy on clean air, the authors regard that policy as almost a paradigm of environmental concern in general. They express their admiration of the Alkali Inspectorate and of the pragmatic approach it exemplifies; they emphasize the need to avoid rigid emission standards and always to remember Mr Justice Thesiger's famous dictum of 1879 that "what would be a nuisance in Belgrave Square would not necessarily be a nuisance in Bermondsey". In particular, they endorse the principle of "best practicable means" that underlies so much of the British way of dealing with environmental pollution. I share these views but am conscious (as, of course, Lord Ashby has long been aware) that what would be applauded in London would not necessarily be applauded in Brussels.

Hans L. Kornberg

Sir Hans Kornberg is Sir William Dunn Professor of Biochemistry at the University of Cambridge, and was Chairman of the Royal Commission on Environmental Pollution from 1976–81.

Logic and proofs

Sets, Functions and Logic: basic concepts of university mathematics
by K. J. Devlin
Chapman & Hall, £2.95
ISBN 0 412 22660 X and 22670 7

The Foundations of Analysis: a straightforward introduction
by K. G. Binmore
Book 1: Logic, Sets and Numbers
Cambridge University Press, £10.00 and £4.95
ISBN 0 521 23322 4 and 29915 2
Book 2: Topological Ideas
Cambridge University Press, £15.00 and £6.95
ISBN 0 521 23350 X and 29930 6

When introducing logic and proofs to first-year undergraduate mathematicians there are two schools of thought. One says: begin with a specific topic, for instance elementary number theory, give some actual proofs, and introduce the logic and the ideas associated with rigorous deduction as the course progresses. The other says: do the logic first and then apply it to the mathematics. The first two books here take the second view, and cover very similar ground.

Devlin's book keeps strictly to the essentials and is to be recommended. The first chapter introduces the basic logical connectives and proof schema. It is a model of clear exposition, showing how mathematical reasoning is firmly based in our everyday experience. The elementary set operations are discussed in the second chapter, although many students will have covered this material at school. The remaining two chapters are concerned with real and complex numbers. Completeness is discussed and sequences introduced briefly: the Bolzano-Weierstrass theorem and the ideas associated with it are not mentioned. The treatment of the complex numbers is straightforward, but again many students will have seen much of this material before. This is a clearly written book, helpful to the students but covering only a limited number of topics.

Binmore's first volume is not as well written but introduces many more topics. Compared with Devlin's book, the chapters on logic and proofs are disjointed and weak in parts. For instance he defines the universal quantifier by saying that $(Ax)P(x)$ stands for "for any x, $P(x)$ holds". The use of the word "any" is most unsatisfactory because it is ambiguous; in everyday usage it sometimes means "all" and at other times means "some". The sections on basic set theory cover all the usual topics and a starred section introduces Zermelo-Fraenkel axiomatic set theory. In both of Professor Binmore's volumes there are a number of starred sections introducing some more advanced topics, this is a good idea as it will stimulate the student's interest.

Chapters seven to ten introduce real numbers, first axiomatically and secondly by describing the Dekekind model. The exposition would have been helped by a clearer and simpler discussion of mathematical induction. The last two chapters briefly cover the development of number systems, some elementary number theory and a discussion of cardinality, countability and the transfinite ordinals. There are a large number of worked examples and clear diagrams. The style is rather disjointed and this is not helped by ruling off each paragraph, sometimes even between the statement of a result and its proof. Perhaps the ideal book would have Devlin's lucid style and Binmore's breadth of treatment.

Binmore's second volume is an introduction to metric spaces and their analysis. Students should have a good grounding in the elementary parts of the ϵ–δ analysis of the real line before embarking on a course based on this book, but this is not provided by volume one. The first nine chapters introduce the basic ideas of metric space theory. Open and closed sets are defined in terms of the boundary operator and, as a consequence, continuous functions are defined in terms of contiguous sets. However, there does not seem to be any benefit in this approach over the usual one. The sections on compactness are particularly clear and the ideas are carefully introduced and motivated.

The second part of the book begins with a good section on limits and continuity, the discussion of which is clear and to the point. Unfortunately the next section on points at infinity is quite unnecessarily complicated. There follow sections on convergence and completeness and the book ends with a discussion of separation in Euclidean space.

The author describes his book as a straightforward approach to mathematical analysis and this it certainly is. However, there are few new insights into the teaching of the subject, perhaps because the standard approach is the right one.

H. E. Rose

H. E. Rose is lecturer in mathematics at the University of Bristol.

Lebesgue integration

Principles of Real Analysis
by Charalambos D. Aliprantis and Owen Burkinshaw
Edward Arnold, £16.00
ISBN 0 7131 3434 8

In any advanced analysis course, the most important topic is Lebesgue's generalization of the Riemann integral. Some people motivate this theory by producing a weird and wonderful function that is not integrable by Riemann's method. The natural reaction is to ask why one would want to compute such an integral. This inadequate motivation fails to justify the importance of the topic and engenders the misconception that it is all generalization for the sake of it. Actually, Lebesgue's theory is spectacularly successful in overcoming the major defect of the Riemann integral. This defect is that all but the crudest convergence theorems fail simply because the appropriate limit functions are not always integrable. However, with the more general Lebesgue integral, all convergence theorems that one could reasonably hope for turn out to be true. This has far-reaching consequences through pure and applicable mathematics to physics, engineering and other sciences. Mathematics would not be complete without the Lebesgue integral.

Although the results of integration theory are easy to state, there are considerable technical difficulties in setting up the definitions and proofs. Authors of textbooks and teachers have wrestled with the problem of sustaining the student's interest through all the preliminaries but no clearly best solution has emerged. This text claims to present an approach that is new and that is suitable for students meeting the subject for the first time. Although the book does not fully live up to either claim, the authors have succeeded in writing a very good text. The general approach is only a minor variant of a standard treatment. Measure theory on semi-rings is developed and the integral is defined in increasing sequences of certain functions built up from measurable sets. The small element of novelty is the emphasis on the interplay between integration spaces and Banach lattices. The treatment is elegant but this level of abstraction is more suitable for students who have previously seen some concrete and elementary version of the theory.

Although Lebesgue integration is the core of the work, other topics are also treated. The book begins with a clear but condensed account of set theory and metric spaces. There follows just enough general topology to enable the authors to present the basic properties of the space of continuous functions on compact Hausdorff spaces. Following the measure and integration, the abstract theories of Banach spaces and Banach lattices are developed. These are then applied to some special topics, including L_p spaces and the Radon-Nikodym and the Riesz representation theorems.

The exposition is clear and, on the whole, the authors succeed in motivating the theory. At every stage there are large and varied collections of examples and exercises, and these are an excellent feature of the book. They ranged from the most concrete to the very abstract and cover every level of difficulty.

Although there are very many texts which treat broadly similar material, this book is on a par with its best competitors.

J. A. Erdos

J. A. Erdos is lecturer in mathematics at King's College, London.

Fra Luca Pacioli and a Young Admirer, by Jacopo de'Barbari. Taken from Alvise Vivarini: his art and influence, a monograph and catalogue of his works by John Steer, published this week by Cambridge University Press at £49.50. The Vivarini family, Antonio, Bartolomeo and Alvis, were, after Bellini, the most important artistic dynasty in fifteenth-century Venice. Alvise, the last of them, was the only artist to work in the Sala di Gran Consiglio of the Palazzo Ducale on the same terms as Bellini.

Proof of the pudding

The Mathematical Experience
by P. J. Davis and R. Hersh
Harvester Press, £12.95
ISBN 0 7108 0364 8

Publishers have only recently observed that even mathematicians have coffee-tables, and have produced something to put on them. The possible readership of this book will not lie outside the circle that may roughly be called mathematical (including here the sciences, computing, operational research, and so on), and its glossy exterior hides a very serious intention, to put over the ideas mooted in this introduction (by Gian-Carlo Rota) that "proof, far from being the core of discovery, is more often than not a way of making sure that our minds are not playing tricks. Few people, if any, had dared write this out loud before Davis and Hersh." One might say to Rota, "What about the late Imre Lakatos?" but the answer is to be found inside, in a very sympathetic treatment of *Proofs and Refutations*.

The question that worries Davis and Hersh is laid out very clearly in their first main section: "How could we as mathematicians prove to a skeptical outsider that our theorems have meaning in the world outside our own fraternity?" (and what causes them to include the last seven words of that sentence would bear a good deal of examination). "If such a person accepts our discipline, and goes through two or three years of graduate study in mathematics, he absorbs our way of thinking, and is no longer the critic outsider he once was. In the same way, a critic of scientology who underwent several years of "study" under "recognized authorities" in scientology might well emerge a believer instead of a critic.

"If the student is unable to absorb our way of thinking, we flunk him out, of course. If he gets through our obstacle course and then decides that our arguments are unclear or incorrect, we dismiss him as a crank, crackpot or misfit." Different ways of looking at this dilemma are turned over discursively as the book progresses. At different times the authors discuss the relationship of mathematics with society, why mathematics works, if it does (with a longish section, "Under the fig-leaf", about applications in the market-place, war, number-mysticism, astrology and religion), abstraction, generalization and formalization. I would not go so far as they would on the lack of utility of formalization: "The *Principia Mathematica* of Russell and Whitehead was the great attempt to carry out the formalization of mathematics. It has been accepted as the outstanding example of an unreadable masterpiece." It is far from unreadable, though now unread because it does not tackle fashionable problems. On the other hand, I would have expected them to want to get more mileage out of "An infinite sequence is called random in the sense of von Mises if every infinite sequence extracted from it and determined by a policy or rule is infinitely-distributed (a specific kind of randomness). Now comes the shocker. It has been established by Joseph Doob that there are no sequences that are random in the sense of von Mises. The requirement is logically self-contradictory."

To some extent, of course, there is no final answer; but to some extent there is – you must read the book to find out what it is. And if you buy it to read you have as bonuses, on page 211 a just-legible table of the first 2,500 primes, and on page 371 (taking Brouwer at his word in an exposition of intuitionism) pi calculated to 5,000 places, clearly legible. It has something for everyone from mathematics teachers in training onwards.

C. W. Kilmister

C. W. Kilmister is professor of mathematics at King's College, London.

NOTICE BOARD

Noticeboard is compiled by Patricia Santinelli and Mila Goldie

Fellowships

Professor Ralf Dahrendorf, director of the London School of Economics was admitted to an honorary fellowship of the Royal College of Surgeons at an extraordinary meeting of the council this month.

Forthcoming events

"The Coup in Poland: Results and Prospects", a conference organized by the Polish Solidarity campaign is to be held in the Clarke Hall, of the University of London's Institute of Education, 20 Bedford Way, London WC1 on February 11 between 9.30–9.30 pm. Chairman: Professor Leonard Schapiro from the London School of Economics. Speakers include Dr Wlodzimierz Brus of Oxford University. Space is limited and admission is by invitation only from Adam Westoby, Faculty of Educational Studies, the Open University, Walton Hall, Milton Keynes MK7 6AA.

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"Working Children in the late Nineteenth Century London, a History Workshop London Seminar being held on February 1 at the Black House, Rathbone Place, London W1 from 7.30–9.30 pm. Details from Susan Birchall, History Workshop, 25 Horsell Road, London N5.

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Research, consultancy, technology transfer and industrial liaison are the themes of a one day workshop/seminar to be held at the North East London Polytechnic's conference centre, Duncan House, Stratford, London E15 on February 8. The workshop aims to assist academic staff to promote consultancy, technology transfer and industrially orientated research in their own institutions. Details from Ken Hart, Division of External Relations and Communication, NELP, Data House 159/161 High Road, Chadwell Heath, Romford, Essex.

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Bristol University's School of Advanced Urban Studies is holding two seminars. The first on "Ethnic Minorities and the Urban Programmes" is from February 15-16 and the second on "Community Based Initiatives in Community Policy: partnership between the local authority and voluntary sector" from March 1–3. Details from Judith Tyler, School for Advanced Urban Studies, Bristol University Rodney Lodge, Grange Road, Bristol BS8 4EA.

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"Education Isn't Glamorous" – Channel Four – A Different Way of Learning?, the fifth in a series of lunchtime lectures on "Channel 4: What's the Difference" being held at the National Film Theatre on February 16, 12.30 pm NFT2 Mrs Naomi McIntosh, senior commissioning editor for education at Channel Four will be interviewed by Phillip Simpson of the BFI education department. Details from Richard Paterson, TV Projects Group, British Film Institute, 81 Dean Street, London W1. Admission 30p.

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"Why Read Literary Criticism", a public lecture arranged by the department of French at Queen's University, Belfast will be held on February 17 at 11 am in the French Lecture Theatre, Lanyon Building. It will be given by Professor M. M. Bowie of Queen Mary College, London University. Admission free.

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CIBS Building Energy Code, a one day symposium organized by the Polytechnic of South Bank's Institute of Environmental Science and Technology in collaboration with the Chartered Institution of Building Services is to be held on February 18 at the Nelson Hsden lecture theatre (SE1 Keyworth Street, London SE1). Fee: £45.00. Details from Faculty Office, Faculty of the Built Environment, Polytechnic of South Bank, Wandsworth Road, London SW8.

"The Rembrandt Drawing" by Margaret Thomas who last week won the £5,000 1981 Hunting Group Art Prize annual national sponsorship in the oil painting section. The painting was chosen out of a total of more than 11,000 submitted by the seven societies of the Federation of British Artists which organized the competition.

Recent publications

"How Can I recruit from Industry?", a practical handbook by Francesca Sidney which gives advice on how to attract young industrial workers to do voluntary work for their local communities. The advice is based on final hand experience in a Young Volunteers from Industry project in York and Swindon. The Royal Jubilee Trust is paying for two part-time staff to continue the work the project started. (Published in association with the Volunteer Centre, by the Bedford Press, 95b or by post £1.15 from Mcdonald & Evans Distribution Services Ltd Estover Road, Plymouth PL6 7PZ.

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Never Too Late to Learn! is a complete guide to adult education opportunities written by two experts in advising mature students. The book contains up to date information and addresses on the most likely routes and sources of help available to all adults who think they would like to gain a qualification, train for a new career, or learn a new skill or subject. Topics include how to cope with financial problems and get financial help. The authors are Gordon Roderick, who is professor of adult education at the University of Sheffield and Judith Bell of the Open University. (Published by Longman, £2.50).

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British Qualifications the 12th edition offers a comprehensive guide to academic, educational, technical and professional qualifications available in Britain today. It lists almost every kind of qualification from CSE to first and higher degrees including those awarded by professional associations and institutions. It specifies which universities, colleges or polytechnics run the appropriate courses and course entrance requirements. The guide covers some 200 careers from accountancy to youth leadership and includes such different occupations as physiotherapy, taxi-driving and laundry management.

(Published by Kogan Page Ltd, 120 Pentonville Road, London N1, £15.95).

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Long Courses for Teachers 1982/83 gives details of some 1300 courses of further training for teachers in England and Wales. The Department of Education and Science/Welsh Office handbook gives information ranging from courses lasting a minimum of four weeks full-time or part-time equivalent up to several years part-time which are organized by universities, polytechnics and other higher education institutions. Subjects covered include advanced educational studies, the main areas of the school curriculum and shortage subjects. (Available from the Department of Education and Science Teachers Branch, Elizabeth House, York Road, London SE1.

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Microtechnology and Teacher Education: a Compendium – of existing courses aimed at teachers who wish to study courses either at initial training level which have a component in microtechnology or are wholly devoted to this study, as well as in service courses. It has been produced by the Association for Teacher Education in Europe with the help of a grant from the Microelectronics Education Programme for England, Wales and Northern Ireland. (Details from Mr Rhys Owen at the Didsbury School of Education, Faculty of Community Studies, Manchester Polytechnic, 799 Wilmslow Road, Manchester.)

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The Annual Careers Guide 1982 published by the Manpower Services Commission contains over 100 articles describing opportunities in the professions, industry, commerce and the public sector. It cover subjects from accountancy to zoology and includes information about the work involved, the opportunities and prospects within the field, the personal characteristics needed and the education and training requirements. (Available from the distribution department: COIC, MSC, Moorfoot, Sheffield S1 4PQ).

Grants

Bath

School of Architecture & building engineering – Professor E. Happold – £42,086 from the Department of Energy for a study involving data Collection and Analysis of three active solar field trials.

School of Electrical Engineering – Dr A. T. Johns – £206,394 (plus computing facilities) from the SERC and GEC Measurements Ltd for his research into the protection of EHV/UHV electric power transmission systems; Professor T. E. Rozzi – £25,480 from the SERC, transferred from Liverpool University for research on Noise filtering in active integrated optics. Dr R. J. Holbeche – £25,200 from the Home Office and Pye Telecommunications Ltd for a study of line synchronisation of mobile radio schemes. Professor T. E. Rozzi – £13,414 from British Telecommunications to carry out theoretical studies of active integrated optical components.

School of humanities & social sciences – Dr G. J. Room – £20,066 from the EEC Commission for a Study of anti-poverty strategies in the European Poverty Programme.

School of materials sciences – Professor B. Harris and Mr T. Adam – £12,069 from the Ministry of Defence for their work on environmental fatigue testing of reinforced plastics.

School of physics, electrical engineering, and engineering – Professor H. O. Berktay, Dr R. Coot, Dr S. L. Hurst, Mr P. J. Wingham, and Dr J. F. Henderson – £151,000 from the SERC for their research on Seabed Surveying.

Keele

Cardiology – £20,000 from W. E. Dunn Charitable Trust to the W. E. Dunn Unit. The unit specialises in research into the diagnosis and treatment of heart disease particularly in the fields of heart surgery and heart pacemakers. Current research projects are concerned with the development of new equipment for use during open-heart surgery, the improvement of efficiency of heart pace-makers, and the prevention of tissue damage during heart attacks.

Kent

Electronics – £17,568 from the Department of Health and Social Security for research on a user-orientated and adaptively structured therapy aid for the speech impaired child, under direction of Dr M. C. Fairburst.

Chemistry – 150,000 Belgian francs from the Nato Collaborative Research Grants Programme for research on high pressure NMR studies on metal carbonyl clusters, under the joint direction of Dr B. T. Heaton and Dr J. Jonas. University of Illinois; – 127,000 Belgian francs from the same institution for theoretical and experimental study of the quadrupole ion trap (quistor), under the joint direction of Dr J. F. Todd and Professor M. Bazil of Université Laval, Quebec; – £102,136 from SERC for research on wide-bore high field NMR Spectrometer at sh old to pre-employment and vocational training. The college's work could also lead to new areas of application for Control Data's Plato computer terminals, two of which are already on site.

At the centre of the study is the college's national diploma educational technology course which is run in association with the West Sussex Institute of Higher Education. To provide a skilled group of teachers to handle the courses

Beaconsfield

Computing laboratory – £44,700 from SERC towards research on typesetting and text processing server for Cambridge ring, under the direction of Mrs H. Brown, S. E. Binns and D. J. Caul.

Computer science – £37,530 from SERC for research on compiling servers for the Cambridge ring, under direction of Professor P. J. Brown and Dr D. Hollish.

Biology – £33,660 from SERC for research on enzymic catalysis of disulphide formation in folding and oxidation of proalbumin and procollagen, under direction of Dr. R. B. Freedman.

Biochemistry – £32,848 from SERC for research on catalyses in streptococcus faecalis var zymogenes, under direction Dr C. J. Knowles.

Physics – £25,600 from SERC for research on pulsed neutron diffraction for molecular liquids and amorphous solids, under direction of Dr J. C. Dore.

Computing – £17,865 from SERC for study on a microcomputer data base system in a distributed data base environment under direction of Dr D. A. Osborrow.

Organic chemistry – £15,900 from SERC for research on colloidal synthetic polymers with molecular recognition and catalytic sites under direction of Dr A. Williams.

Social psychology – £14,657 from the Independent Broadcasting Authority for a research project by Dr Kevin Durkin, entitled "Sex-roles and Children's Television".

London

Institute of Education

Child Development – Mrs M. M. Shields. £19,993 from the SSRC for a study of the young child's representation of persons and the social world.

Linguistic Minorities – Dr V. S. Khan. £47,170 from the Commission of the European Communities for a study of the educational needs of linguistic minorities.

King's College

Education: Mr O. J. Whitty, in association with Professor A. D. Edwards of the University of Newcastle-upon-Tyne, £39,809 from the SSRC for a study of the Assisted Places Scheme.

Leicester

Physiology and Medicine – Professor R. Whitam, Professor J. D. Swales and Dr H. Thomson – £47,528 from MRC to undertake new research into hypertension.

Obstetrics and Gynaecology Professor J. MacVicar and Dr D. A. Walker – £15,429 from Birthright for research on foetal electroencephalography.

Newcastle upon Tyne

Professor Michael Rawlins Ruth and Lionel Jacobson and Professor Sam Shuster – £57,183 from MRC for research into how drugs are handled in patients with psoriasis.

Wolfson Research Group – £100,000 from the Wolfson Foundation for research on the production and characterization of hard, high strength materials for cutting tools, abrasives and other engineering applications.

Transport Operations Research Group – Professor Peter John Hills – £43,623 by the Transport and Road Research Laboratory to support study on road lighting and accidents in wet conditions.

Oxford

Dr B. J. Bellhouse engineering science) and **Professor M. E. Spira** – (Nuffield professor of anaesthetics) £75,000 from the Wolfson Foundation to enable them to develop a novel artificial lung, intended for the treatment of 'shock lung' (acute respiratory distress syndrome).

Department of engineering science – £30,000 from the same institution for research into a proposed new laboratory test for measuring some of the engineering parameters required for building on or with soil.

Stirling

Sociology – Dr Russell Dobash and Patrick McLaughlin – £12,899 from the Scottish Home and Health Department for a study on institutional perceptions in the management of public drunkenness.

Biology – Dr M. H. Horne and Dr S. E. Hartley – £30,000 from the Swedish Hasselad Foundation to support their work on fish genetics.

Chemistry – Professor J. M. G. Cowie – £38,964 a joint grant from SERC (£21,480), Dutch State Mines (£15,000) and the Royal Society (£2,484) to carry out research on polymer science.

Economics – Professor C. V. Brown – £32,009 from H. M. Treasury, a supplementary grant to a project examining the effect of taxation on the short-run labour supply: This brings the total amount awarded to the project team to over £100,000.

Wales, Bangor

Oceanography – Professor John H. Simpson – £40,455 from NERC to support a three year programme of studies on the Scottish Coastal Current. The investigations will involve a series of extensive ship surveys of the Scottish shelf and measurements which will supplemented by observations of the concentrations of the fortape caesium 137 which is transported up the Scottish coast after being released from the nuclear plant at Windscale.

News

Colchester College of Further Education is working on a major study of computer based education at sh old to pre-employment and vocational training. The college's work could also lead to new areas of application for Control Data's Plato computer terminals, two of which are already on site.

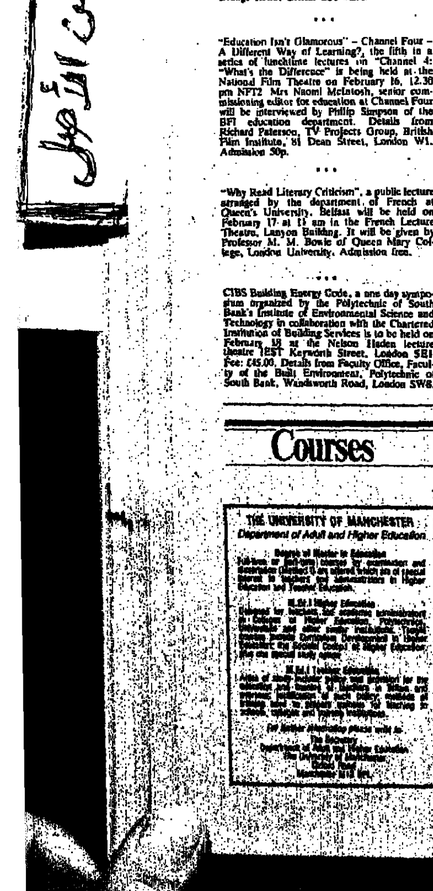
At the centre of the study is the college's national diploma educational technology course which is run in association with the West Sussex Institute of Higher Education. To provide a skilled group of teachers to handle the courses

ish extensive programme of in-house training is underway and staff are being encouraged to learn how to write their own computer materials. Plato is also being used to run special adult literacy courses.

Bretton Hall College of Higher Education is to offer a new three year honours degree in music from September 1982. The degree which will be validated by the University of Leeds will be only the second three years honours degree available within the Leeds collegiate system.

Initially opportunities will be available to combine the music work with dance studies, it is hoped that further options planned on similar lines will soon be offered in relation to inter arts and drama programmes.

Courses



THE UNIVERSITY OF MANCHESTER
Department of Adult and Higher Education

Degree of Master in Education
Full-time or part-time study for graduate teachers and lecturers offered in response to the growing demand for advanced qualifications in higher and further education.

M.Ed.1 Higher Education
Designed for lecturers, new academic administrators and graduate teachers in higher education, polytechnics, colleges of further education, and in the public sector. Course Director: Tom Bourner. Applications should be made by 28 February 1982.

M.Ed.2 Further Education
Aimed at staff teaching in the further education sector, including those in colleges of further education, polytechnics, and in the public sector. Course Director: Tom Bourner. Applications should be made by 28 February 1982.

For further information please write to:
The Secretary
Department of Adult and Higher Education
The University
Manchester M13 9PL

Open University programmes January 30 to February 5

Saturday January 30

BBC2
10.30 Health Choices: Sex-Sex (P21; prog 3)
11.00 Mathematics Across the Curriculum. What's it About? (T45/231; prog 6)
11.20 Health Choices: Exercise course. Preparatory Maths. Augee (B101; prog MAP54)

Sunday January 31

BBC2
10.10 The Pre-School Child. Going Shopping (P91; prog 2)
10.30 Energy in the Home. Cutting Your Losses (T47/82; prog 5)
11.00 Consolidation in the Old. Prog 4
11.25 Mathematics Across the Curriculum. What's it About? (T45/231; prog 6)

RADIO 3 (VHF)
7.15 Counter Dividend. The Case for the Consumer
7.30 The First Years of Life. Baby Talk (P91); prog 3

Wednesday February 3

BBC2
12.30 Developing Mathematical Thinking. Problems 1: Practices 4-2 (MA235; prog 7; prog 8)

Thursday February 4

BBC2
7.30 The First Years of Life. The World at One (P91; prog 3)
12.05 Health Choices: Sex-Sex (P21; prog 3)
12.30 Developing Schools. The Interview (P47; prog 4)

Friday February 5

RADIO 3 (VHF)
09.25 The Pre-School Child. When Everything Gets You Down (P91; prog 3)
09.40 Health Choices. Keeping a Balance (P021; prog 4)
06.20 Into the Open 4. Preparing Your Home for Your Family

• repeated programmes

Classified Advertisements

To place your advertisements write to:
The Advertisement Manager, The Times Higher Education Supplement, P.O. Box 7, New Printing House Square, Gray's Inn Road, London WC1X 8EZ.
Tel. 01-837 1234.

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Appointments vacant:
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Colleges and Departments of Art
Research Posts
Administration
Overseas
Adult Education
Librarians
General Vacancies
Official Appointments

Appointments wanted:

Other Classifications:
Awards
Exhibitions
Personal
Courses
Conferences and Seminars
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Rates:
Classified Display – £8.25 pscc
Minimum size: 9cm × 1 col @ £74.25
Classified Linage – £1.60 per line
Minimum 3 lines – @ £4.80
Box number – £2.00

Copy deadlines:
Classified Display: Friday in the week prior to publication
Classified Linage: Monday 10.00 am in the week of publication

Universities

Murdoch University
PERTH
WESTERN AUSTRALIA

Dean of the School of Veterinary Studies

Applications are invited for this position which will become vacant in May 1983. The appointee will be expected to take up duties at about that time.

The Murdoch Veterinary School is one of the most modern and well equipped in the world. It consists of two major divisions, Veterinary Biology and Applied Veterinary Medicine. Forty academic staff within the School, with some assistance from other Schools, teach fifty students in each year of the five year B.V.M.S. course; there are at present 30 postgraduate students.

All School facilities, including a 40 hectare farm and an 8 hectare Native Fauna Unit, are on the main University campus located in an extensive bushland setting only 12 kilometres from Perth.

The Deanship

The Dean is ultimately responsible for the quality of teaching and research throughout the School and for the deployment of staff and resources. The Dean is also expected to liaise with industry, the profession and the public. The appointee will have the opportunity to perform a modest amount of personal teaching and research.

Qualifications

Preference will be given to applicants who not only have appropriate formal qualifications and experience but who can also provide evidence of imaginative leadership, judgement, sensitivity and stamina.

Salary and Conditions

The appointment will be as Dean for an initial term of six years and as a Professor in the Veterinary School on a tenured basis subject to retirement at the end of the year in which the appointee attains 65 years of age. If the appointment as Dean is not continued after a six yearly review, the appointee will be entitled to continue as a Professor. The salary is the current Australian University $A43,904 per annum.

Conditions of appointment include superannuation, long service leave, access to Outside Studies Programmes, payment of fares to Perth for the appointee and dependent family, removal and settling-in allowances, entertainment allowance and use of a car.

Procedure for Application

There is no prescribed application form. Applicants are invited to submit a full curriculum vitae supported by an appropriate letter which includes the names and addresses of three referees. Applications should reach the

Personnel Officer
Murdoch University
Perth, Western Australia 6150

by June 30th 1982. Applications resident in the United Kingdom, Europe or Africa at the time of application should also forward one further copy to:

The Secretary General
Association of Commonwealth Universities
36 Gordon Square
London WC1H OPF United Kingdom

Further general information on the University and the conditions of appointment and facilities is available from the Personnel Officer, Murdoch University or from the Association of Commonwealth Universities.

UNIVERSITY OF ZIMBABWE

Faculty of Veterinary Science

The University of Zimbabwe is establishing a Faculty of Veterinary Science and plans to accept the first students into a five-year, post-'A' Level degree course March 1982.
Applications are invited for the following posts:
INAUGURAL DEAN
It is envisaged that the Inaugural Dean will be appointed as Professor and Head of one of the para-clinical or clinical Departments in the new Faculty.
SENIOR LECTURESHIPS/LECTURESHIPS in the following disciplines:
Veterinary or Animal Physiology, Histology, Veterinary or Animal Biochemistry, Animal Production.
All posts are available with immediate effect.
Qualifications:
For the post of Inaugural Dean a senior academic veterinarian is sought and a minimum requirement will be a degree in Veterinary Science/Medicine with specialised experience in one of the para-clinical or clinical disciplines together with a postgraduate qualification, teaching and research experience.
For the Senior Lectureships/Lectureships a degree in Veterinary Science/Medicine with specialised experience in the appropriate field will be preferred; however, non-veterinarians with an appropriate degree and specialised experience may apply. For all posts applicants with postgraduate qualifications, teaching and research experience will be preferred.
Initially, the posts in Physiology, Histology and Biochemistry will be attached to the appropriate Departments in the University's Faculty of Medicine, and the post in Animal Production to the Department of Animal Science in the University's Faculty of Agriculture.
Salary Scales (Approximate Sterling equivalents in brackets):
For qualified Veterinarians:
Professor: Z$24,000 + 324 – 25,620 (£17,260 × 233 – 18,445)
Senior Lecturer: Z$20,100 × 800 – 22,500 × 504 – 23,004 (£14,472 × 432 – 16,200 × 363 – 16,563)
Lecturer Grade I: Z$17,388 × 528 – 19,500 (£12,519 × 380 – 14,039)
Lecturer Grade II: Z$13,764 × 516 – 16,860 (£9,910 × 372 – 12,142)
For non-Veterinarians:
Professor: Z$18,998 × 840 – 23,198 (£13,677 × 605 – 16,702)
Senior Lecturer: Z$14,040 × 528 – 15,624 540 – 16,324 (£10,109 × 380 – 11,249 × 389 – 13,194)
Lecturer I: Z$12,720 × 528 – 14,832 (£9,158 × 380 – 10,678)
Lecturer Grade II: Z$7,008 × 504 – 8,528 × 528 – 12,168 (£5,046 × 363 – 6,881 × 380 – 8,761).
Conditions of Service: Both permanent terms and short-term contracts are offered. Persons who are not Zimbabwean citizens may be appointed only on a short-term contract basis with an initial contract period of 5 years.
Further Particulars on the above posts, on conditions of service and on the method of application should be obtained, prior to submitting an application, from the Director, Appointments and Personnel, University of Zimbabwe, PO Box MP167, Mount Pleasant, Salisbury, Zimbabwe (Telegrams: UNIVERSITY, Salisbury. Telex: 4-152 ZW), or from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.
Applications should be submitted to the University by 28 February 1982.

UNIVERSITY OF PAPUA NEW GUINEA
(Port Moresby)

Applications are invited for the post of SENIOR LECTURER/LECTURER IN MARINE BIOLOGY AND FISHERIES. Applicants should have a Ph.D and appropriate research and teaching experience. The appointee will be expected to teach undergraduate courses in Marine Biology and Fisheries, and to contribute to general biological teaching. A good understanding of population theories, sampling and statistics is essential. He/she will also be expected to encourage, supervise and develop postgraduate research studies. Excellent marine research and teaching facilities are available at the University Motupore Island Research Centre and the appointee will be expected to play an active role in the further development of these facilities. Salaries: Senior Lecturer K18,195 pa. Lecturer 2 K16,346 pa. Lecturer 1 K14,495 pa. (£1 sterling = K1.28). Three-year contract; gratuity; support for approved research; rent-free accommodation; family passages; baggage allowance; leave fares after 18 months service; education subsidies; salary continuation scheme to cover extended illness or disability. Applicants who wish to arrange secondment from their home institutions will be welcomed. Detailed applications (2 copies), including a curriculum vitae, a recent small photograph and naming 3 referees, should be sent to the Assistant Secretary (Staffing), University of Papua New Guinea, Box 4820, University PO, Papua New Guinea to arrive no later than 3 March 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF PAPUA NEW GUINEA
(Port Moresby)

Applications are invited for the post of ARCHIVIST. The position has been newly created and the appointee's responsibilities will involve the sorting, calendaring and the management of a growing collection of private, commercial and church archives dealing with Papua New Guinea as well as the responsibility for organizing the University archives. Applicants should be graduate qualified archivists with substantial experience.
Salary: K14,495 pa. (£1 sterling = K1.28). Three-year contract; gratuity; support for approved research; rent-free accommodation; family passages; baggage allowance; leave fares after 18 months service; education subsidies; salary continuation scheme to cover extended illness or disability. Applicants who wish to arrange secondment from their home institutions will be welcomed. Detailed applications (2 copies), including a curriculum vitae, a recent small photograph and naming 3 referees, should be sent to the Assistant Secretary (Staffing), University of Papua New Guinea, Box 4820, University PO, Papua New Guinea to arrive no later than 3 March 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF PAPUA NEW GUINEA
(Port Moresby)

Applications are invited for the post of LAW LIBRARIAN, from candidates with a degree (preferably in Law), and an outstanding recognised library qualification and substantial experience of Law Librarianship. The post is graded as Senior Assistant Librarian 1: Salary: K18,345 pa. (£1 sterling = K1.28). Three-year contract; gratuity; support for approved research; rent-free accommodation; family passages; baggage allowance; leave fares after 18 months service; education subsidies; salary continuation scheme to cover extended illness or disability. Applicants who wish to arrange secondment from their home institutions will be welcomed. Detailed applications (2 copies), including a curriculum vitae, a recent small photograph and naming 3 referees, should be sent to the Assistant Secretary (Staffing), University of Papua New Guinea, Box 4820, University PO, Papua New Guinea to arrive no later than 3 March 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

ST. JOHN'S COLLEGE, OXFORD

Junior Research Fellowship in Mathematics

The College proposes if there should be a suitable candidate to elect to a Junior Research Fellowship in Mathematics from 1 October 1982, or as soon as possible thereafter. Candidates should not normally have exceeded 28 years at the time of their election and should have already obtained at least a first degree. The Fellowship is open to men and women.

The person appointed will be expected to engage in research, to participate in administrative and pastoral work, and to teach Pure Mathematics for up to six hours a week, according to the College's needs. All teaching will be paid for at the normal capitation rate.

The Fellowship will be tenable for three years, but will be eligible for renewal for a fourth year.

The Junior Research Fellow will receive a stipend of £4715 a year, be entitled to lunch in Hall, and to a High Table without charge and will, if unmarried, be given free rooms or, if married, a housing allowance.

Further particulars and forms of application may be obtained from the Senior Tutor, completed application forms should be sent to the Senior Tutor as early as possible and not later than Saturday, 27 February, 1982.

CAMBRIDGE
UNIVERSITY OF

SMUTS PROFESSORSHIP OF THE HISTORY OF THE BRITISH COMMONWEALTH

Applications invited for the above fully-endowed Chair, devoted to the advancement of knowledge of Commonwealth Studies, which is vacant by the death of Professor R. F. Stokes.

Present pensionable stipend £18,670.

Applications (10 copies) marked "Smuts Chair" should be sent to the Secretary General of the Faculties, from whom further information may be obtained at the General Board's Office, The Old Schools, Cambridge CB2 1TN. Names of not more than three referees may be submitted if desired.

Closing date: 20 March 1982.

DURHAM
UNIVERSITY OF

CHAIR OF DIVINITY

Applications are invited for the CHAIR OF DIVINITY to be filled from October 1982 following the retirement of Professor C. F. Barrett. The person appointed will be required to teach in the field of New Testament Studies.

The appointment will be made on the Professorial salary scale (£12,816–£14,916) per annum together with the normal pension arrangements.

Applications (three copies), including the names of three referees, must be submitted not later than 1 March 1982 to the Registrar and Secretary, Old Elvet, Durham DH1 3HP, from whom further particulars may be obtained.

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

AUSTRALIA
SYDNEY
THE UNIVERSITY OF NEW SOUTH WALES
SCHOOL OF DRAMA
LECTURER

Chair in Library Management and Planning

Applications are invited for a Chair in Library Management and Planning in the Department of Library and Information Studies, to develop research and teaching in the field and participate in the general work of the Department. He or she would be expected to have interests in library management and/or international planning. Salary within professorial range; previous applicants will be considered. Requests for further details and application forms to Paul Johnson, Establishment Officer, ref. 82/4LS.

Loughborough *Leicestershire*

High academic qualifications in drama and theatre studies are required. Experience in the field of educational and community drama could be an advantage.

The position is available now and appointment should be on the basis of a fixed term contract for two years.

Salary $A30,965 range $A37,836 Commencing salary according to qualifications, experience.

Application close 24 February 1982.

Full information about conditions of employment and method of application obtainable from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

Universities continued

BUCKINGHAM
THE UNIVERSITY COLLEGE

CHAIR OF POLITICS

Applications are invited for appointment to the Chair of Politics, from 1st October 1982 or as soon as possible thereafter.

Further particulars and forms of application from the Academic Registrar, University College at Buckingham, Buckingham MK18 1EG, with whom applications should be lodged by 15th March. H1

CAMBRIDGE
CORPUS CHRISTI COLLEGE

Applications are invited for the post of COLLEGE LECTURER AND DIRECTOR OF STUDIES IN CLASSICS tenable for three years. The successful candidate will be elected to a Fellowship of the College from 1st October 1982, and will be required to be resident in Cambridge during Full Term and undertake up to twelve hours of teaching a week in Classics for the College, mainly for the Classical Tripos. Duties will also include examining for the College.

The stipend will be referred to that for an Assistant Lecturer in the University of Cambridge (at present £6,475 by four increments to £8,105 a year) and initial placing on this scale will depend upon age and experience. The stipend is pensionable under F.S.S.U. The Accumulation is likely to be available for the couple or married person.

The College has applied to the Privy Council for special powers to change its Statutes in order to be able to elect women after October 1982.

Applications should be sent by not later than 1 March 1982 and should include a curriculum vitae giving details of the applicant's qualifications, career, and current research interests. The names of not less than two referees should be supplied and at least should be qualified to speak of the candidate's teaching experience should also be furnished. H1

CAMBRIDGE
UNIVERSITY OF

MELLON RENEARCH FELLOWSHIP IN AMERICAN HISTORY

The Managers of the Mellon Fellowship fund invite applications for a Mellon Research Fellowship in American History, to be held from 1 October 1982. The research Fellow's duties shall be to pursue an original research in American History. For the purpose shall be defined as the history of the United States of America from its colonial beginnings. The Research Fellowship shall be tenable for a period of one year with the possibility of annual renewal up to a maximum total of two years. The stipend will be within the range £4,900 to £6,475.

It is expected that candidates will either have completed a PhD dissertation or submitted such substantial written work if requested.

Applications, which should include a statement of proposed research and a curriculum vitae, together with the names of not more than three referees who have knowledge of the candidate's work, should be sent to the Secretary, Mellon Programs of the Mellon Fellowship, Faculty of History, West Road, Cambridge CB3 9EF, to reach him by Friday, 5 March, 1982. H1

DURHAM
UNIVERSITY OF

MSc in Ecology

The Botany and Zoology departments offer a one-year course leading to an MSc in October next year in Ecological Principles (Ecology) supervised by N.E.R.C. type Advanced Course. Studentships, carrying details from Dr. A. Pearson, Science Laboratories, South Road, Durham. H1

EDINBURGH
HERIOT-WATT UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE

LECTURER

Applications are invited from suitably qualified candidates. Qualified graduates in computer science, or in mathematics with computing interests.

The Department offers a course in Computer Science, a joint degree in Computer Science and Accounting and an MSc in Software Engineering. Research interests as well as research which can lead to a research qualification are welcomed. Applicants should be able to contribute to teaching and research within the Department.

Salary Scale: £6,070 – £10,656 p.a.

Further particulars and application forms may be obtained from the Staff Officer, Chambers Street, Edinburgh EH1 1HX (quoting ref. 1/82) to whom completed applications should be returned by 15 February 1982. H1

DURHAM
UNIVERSITY OF

LECTURESHIP IN ECONOMIC HISTORY

Applications are invited for the post of Lecturer in Economic History from 1st October 1982.

Salary will be on the scale £6,070 – £12,860 per annum (under review) with superannuation benefits.

Applications (three copies), naming three referees, should be sent to the Registrar and Secretary, 5th Old Elvet, Durham DH1 3HP by 12th February, 1982, from whom further particulars may be obtained. H1

JOHANNESBURG
UNIVERSITY OF THE WITWATERSRAND

DEPARTMENT OF INTERNATIONAL RELATIONS

SENIOR LECTURER

Applications are invited from suitably qualified persons, irrespective of sex, colour or national origin for appointment to the above post, which is a three year contract position. The possibility of subsequent tenure exists.

Persons with expertise and teaching experience in strategic studies and international relations would be given preference.

The salary attached to the post will be within the range R14 470 to R20 850 per annum. (£1 = R1.80 approx.).

Intending applicants are advised to obtain further information about conditions relating to this post from the Secretary-General, South African Universities Offices, Chichester House, 278 High Holborn, London WC1V 7HE, or from the Director (Personnel Office), University of the Witwatersrand, Jan Smuts Avenue, Johannesburg 2001, South Africa, with whom applications should be lodged by 28 February 1982. H1

LONDON
UNIVERSITY OF

CHAIR OF CHEMISTRY AT THE SCHOOL OF PHARMACY

The Senate invites applications for the Chair of Chemistry tenable at the School of Pharmacy. The successful candidate will be expected to teach physical chemistry to undergraduate and postgraduate students of pharmacy and to undertake research in physical chemistry relevant to pharmacy.

Applications (three copies), should be sent to the Academic Registrar (THES), University of London, Senate House, London WC1E 7HU from whom further particulars should first be obtained.

Closing date 26 February 1982. H1

MALAWI
UNIVERSITY OF

CHANCELLOR COLLEGE

Applications are invited for posts of LECTURER, SENIOR LECTURER and ASSOCIATE PROFESSOR. Candidates should have a good honours degree in Sociology or Social Anthropology as well as a relevant higher qualification, preferably a higher degree. Preference will be given to those who have taught and had experience in African Universities.

Salary scales: K6,600 – 8,000 pa. Lecturer K9,360 – 14,040 pa. Senior Lecturer K15,120 – 18,000 pa. Associate Professor K18,960 – 22,800 pa. Malawi kwacha 1 = £1.331. Gratuity of 15–25%; superannuation scheme transferable with FSSU; family passages; various allowances; biennial overseas leave. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to the Registrar, University of Malawi, Chancellor College, Private Bag, Zomba, Malawi to arrive no later than 1 March 1982. Further details are available from the same address. H1

NEWCASTLE UPON TYNE
UNIVERSITY OF

DEPARTMENT OF CHEMICAL ENGINEERING

Applications are invited for a temporary post of Research Associate funded by SERC for a three year period. Candidature should have a PhD degree combined with good working knowledge of mathematical techniques. The person appointed will be concerned with mass transfer problems in liquid-liquid systems and, in particular, the development of laser techniques for measuring rates of surface renewal of droplet systems.

Initial salary will be up to £6,880 per annum on the scale Range 1A (RS.070 – £10,575 p.a. according to age, qualifications and experience.

Written applications giving full details and naming three referees should be forwarded as soon as possible to Professor D. B. Thornton, Department of Chemical Engineering, The University, Merz Court, Claremont Road, Newcastle upon Tyne, NE1 7RU, from whom further information can be obtained. Telephone (0632) 328811, ext. 33091; please quote reference: H1

OXFORD
WOLFSON COLLEGE

NON-STIPENDIARY JUNIOR RESEARCH FELLOWSHIPS 1982

The College proposes to elect to about twelve non-stipendiary Junior Research Fellowships. If candidates of sufficient merit present themselves, without limitation of subject, for two years in the first instance (renewable for not more than one further two-year period). These Fellowships are Common Table rights (seven free meals a week) and are open to both men and women. Candidates should normally be under the age of 30 on 1 October 1982. Preference will be given to candidates who have not already held a Junior Research Fellowship at another College. In the natural sciences preference will be given to those holding a doctorate or who expect to hold one by October 1982. In the Arts candidates should have had at least one year's research experience.

Applications, in duplicate and preferably typed, including curriculum vitae and the names of two or three referees, should be sent to the President, Wolfson College, Oxford OX2 6UD, by Friday, 2 April 1982. Candidates should give details of the work they will be doing in Oxford and of their means of support. Candidates should write to their referees asking them to send references to the President without further request. Interviews of shortlisted candidates will take place on 2nd and 4th June.

Junior Research Fellows are not full members of the Governing Body of the College; but they are eligible to sit on many College committees, and may be elected as representative members of the Governing Body. H1

SWAZILAND
UNIVERSITY COLLEGE

Applications are invited for the post of LECTURER IN GEOGRAPHY. Candidates must hold a higher degree in Geography or equivalent experience in teaching or English with a view to supporting the students' knowledge of grammar would be an advantage. The appointee will teach, supervise other courses, service courses to First Year Students. Salary scale: E7,800 – 9,840 pa. £1 sterling = E1.01. Two year appointment initially; gratuity; resettlement allowance for those not qualifying for superannuation; education allowances; free passage; medical scheme; reasonable rental accommodation; family passages; biennial overseas leave. Detailed applications (6 copies), including curriculum vitae and naming 3 referees, should be sent by airmail to the Registrar, University College of Swaziland, Private Bag, Kwaluseni, to arrive no later than 5 March 1982. Applicants resident in UK should also send 1 copy to Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London, SW1A 2BN. Further details are available from either address. H1

WARWICK
UNIVERSITY OF

LECTURESHIP IN COMPUTER SCIENCE

Applications are invited for a lectureship in the Department of Computer Science. Candidates should have a wide knowledge of systems programming and practical experience of programming in a professional environment while previous University experience is not necessarily required, a strong interest in undergraduate teaching and research activity is assumed. The Department's main teaching computer is a VAX 780 supporting Unix, and other machines are available including a B6700 in the University Computer Unit. The post is tenable from 1st October 1982. Initial salary up to the top point on the scale £6,070 – £8,840 (£8,840 including an age and qualifications allowance) according to qualifications and experience. Further particulars may be obtained from the Registrar, University of Warwick, Coventry CV4 7AL, quoting Ref. No. L/47, to whom closing date for receipt of applications is 15 February 1982. Telephone enquiries: Coventry (0203) 523701. H1

BELFAST
THE QUEEN'S UNIVERSITY

RIDDEL HALL BURSARIES

At least one residential bursary will be awarded in 1982/83 to enable an ordinand from another university to study for the Belfast Certificate in Theology. Candidates should be graduates of Universities of Independent Status, and a working knowledge of German, Apostolic Succession, Anglican Orders, and Ecumenical Studies. Applications should be sent to the Warden, Riddel Hall, 108 Stranmillis Road, Belfast BT9 5DU, from whom further information may be obtained. H1

OXFORD
LADY MARGARET HALL

OXFORD OX2 6QA
Telephone: 0865 54345

BURSITT TAYLOR FELLOWSHIP 1982-3

A Travelling Fellowship, value £750, tenable for 1982-3 is offered by the University of Oxford for the advancement of independent research in any branch of study. Primarily intended for post-doctoral candidates or for equivalent work by graduates of the universities of Australia, New Zealand and Canada who are visiting Europe for study abroad.

Further particulars may be obtained from the undersigned. Applications should be sent to the Secretary, Lady Margaret Hall, Oxford OX2 6QA, to reach her by 1 March 1982. H1

SWITZERLAND
THE UNIVERSITY OF BASLE

Teaching assistant, preferably post-graduate, required from April 1982 to help with introductory classes in English linguistics and phonetics. Candidates should have a higher degree in linguistics or English and be native speaker competent in German, and a working knowledge of German. Appointment initially for one year, responsible to Professor W. Haas. Salary approximately SFr 3,000 per month. Detailed application forms and further particulars from Professor W. Haas, Seminar für Englische Philologie, Nadelberg 6, CH-4051 Basel, Switzerland, to be returned by 15 February 1982. H1

ULSTER
THE NEW UNIVERSITY

SCHOOL OF SOCIAL SCIENCES

ECONOMICS

SENIOR LECTURER OR LECTURER OR SPECIAL RESEARCH FELLOW

Applications invited for this post which will be available from 1st October. Candidates should have a Professional qualification and a Degree in Accounting, Business Administration, Economics or a cognate subject. A special field of interest should preferably be Management Accounting. The appointment will be made at an appropriate point on the following scales (inclusive with FSSU/USS):

Senior Lecturer £12,305 – £15,410 per annum; Lecturer £6,070 – £12,860 per annum.

Further particulars may be obtained from the Secretary, The New University of Ulster, Coleraine, Northern Ireland BT52 1SA (Quoting Ref. R2/81 to whom applications, including a tabulated curriculum vitae and the names and addresses of three referees, should be sent not later than 15th February 1982. H1

Polytechnics

Faculty of Arts

DIRECTOR OF STUDIES AND HEAD OF SCHOOL OF LANGUAGE AND LITERATURE

Salary Scale: £13,914 – £16,590

Applications are invited for the post of Head of the School of Language and Literature. The School's interests include English, French and German Studies in Language, literature and drama at degree, diploma and postgraduate level.

Applicants should have a special interest in one or other of these main activities, and should be capable of making a significant contribution to the academic work of the Polytechnic in teaching, research and course development.

The successful candidate will be eligible for consideration for a Professorship.
The Polytechnic is a direct grant institution with an independent Board of Governors. It opened in 1971 and has a student population of some 7950. It has extensive new purpose-built accommodation, including 830 residential places on the 114-acre campus overlooking the sea at Jordanstown, a pleasant and quiet residential area. There is a scheme of assistance with removal.

Further particulars and application forms which must be returned by 15 February 1982 may be obtained by telephoning Whiteabbey (0231) 65131, Ext. 2243 or by writing to:

The Establishment Officer,
Ulster Polytechnic, Shore Road,
Newtownabbey, Co. Antrim, BT37 0QB.

Ulster Polytechnic

Bristol Polytechnic

Assistant Director (Academic)

Applications are invited for the post of Assistant Director (Academic) which carries responsibility to the Director for the general oversight of all academic affairs.

Applicants should have substantial experience of academic leadership and management in higher education and should additionally be experienced Teachers and Research Workers. Preference may be given to candidates from the fields of applied science, applied mathematics and engineering, and to those with experience in industry or the professions.

The appointment will be effective from 1st May 1982, or the earliest possible date thereafter.

The post carries a salary of £20,000 (under review).

Please quote post reference number L/128 in all communications. Closing date 6th February 1982.

For further details and an application form, to be returned as soon as possible, please contact the Personnel Office, Bristol Polytechnic, Coldharbour Lane, Frenchay, Bristol, BS16 1QY.

Polytechnics continued

Faculty of Business and Management

LECTURER II/SENIOR LECTURER CATERING MANAGEMENT

A vacancy exists for a person to teach in the technical areas of Food Production and/or Food Service in the training kitchens/restaurant of the School. All applicants should be academically or professionally qualified. Previous teaching and/or industrial experience would be an advantage.

Faculty of Technology

LECTURER II/SENIOR LECTURER MECHANICAL ENGINEERING (CONTROL SYSTEMS)

Applicants should be experienced in the field of control systems, should possess a relevant degree and have research or industrial experience.

LECTURER II/SENIOR LECTURER BUILDING SERVICES

Applications are invited from graduates or professionally qualified (CEng or MCIBS) people with suitable industrial, consultancy, teaching or research experience to teach Building Services and to assist in the development of courses in the School of Building.

LECTURER II/SENIOR LECTURER ESTATE MANAGEMENT

Applicants should be Chartered Surveyors in the General Practice Division or the Planning and Development Division of the RICS or possess an equivalent degree or professional qualification. Adequate experience in practice or research is essential and previous teaching experience, whilst not essential, would be desirable.

Salary Scales:
Senior Lecturer £8,934 – £11,829/£12,141
Lecturer II £6,426 – £10,431
The above salary scales will be under review from 1 April 1982.

The Polytechnic is a direct grant institution with an independent Board of Governors. It opened in 1971 and has a student population of some 7,950. It has extensive new purpose-built accommodation, including 830 residential places on the 114-acre campus overlooking the sea at Jordanstown, a pleasant and quiet residential area. There is a scheme of assistance with removal.
Further particulars and application forms which must be returned by 15 February 1982 may be obtained by telephoning Whiteabbey (02231 65131 Ext 2243 or by writing to:

The Establishment Officer,
Ulster Polytechnic, Shore Road,
Newtownabbey, Co. Antrim, BT37 0QB.

Ulster Polytechnic

COVENTRY (LANCHESTER) POLYTECHNIC

FACULTY OF ENGINEERING

PRINCIPAL LECTURER IN THE DEPARTMENT OF SYSTEMS CONTROL

£11,298–£14,238

Application forms and further particulars from Assistant Personnel Officer Coventry (Lanchester) Polytechnic, Priory Street, Coventry, CV1 5FB, to whom they should be returned by Monday 8th February, 1982. H3

BRISTOL POLYTECHNIC

DEPARTMENT OF BUSINESS STUDIES

Applications are invited for the following post (s) duties to commence on 1 September 1982.

LECTURER II/ SENIOR LECTURER IN BUSINESS ORGANISATION/ BUSINESS ENVIRONMENT STUDIES

Ref No. L/86/123

To teach Business Organisation and Environment Studies (mainly to Engineering and Business) courses, HNC and HND, Higher National Certificate/Diploma programmes and Professional Courses.

Candidates should have a degree to a professional qualification in business studies and teaching experience relevant to the above work would be an advantage.

Salary scales: LII £6,426–£9,654 (bar) £10,431 per annum) SL £8,934–£11,829 (bar) £12,141 per annum

The appointment will be made at the appropriate scale according to qualifications, service/experience. Placing on scale from the LII scale to the SL scale is in accordance with the provisions of the Burnham (Further Education Report).

For further details and an application form which must be returned by 15 February 1982, please contact the Personnel Office, Bristol Polytechnic, Coldharbour Lane, Frenchay, Bristol or telephone Whitchurch 668241 Ext 316 or 617.

Please quote Reference Number as detailed in all communications. H1

PLYMOUTH POLYTECHNIC

FACULTY OF MARITIME STUDIES
Department of Marine Technology

SENIOR LECTURER/ LECTURER II in Ship Operations & Marine Engineering

Salary: £9,462 – £12,141
(Level of appointment and starting salary dependent upon qualifications and experience)

Applicants should hold either an Extra Master Mariner or Extra First Class Engineer Certificate or, alternatively, a D.O.T. Class 1 Certificate (Deck or Engineer) plus additional qualifications. Possession of a minimum of recent experience in LNGs, LPG's or VLCC's (with C.O.W.) will be a particular advantage. The successful appointee will be required to lecture in Ship Operations, Command & Responsibility and/or Marine Engineering for Class 1 Master Mariner students.

Application forms to be returned by Friday 12th February 1982 can be obtained with further particulars from the Personnel Officer, Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA.

Universities continued

UXBRIDGE
BRUNEL UNIVERSITY

RESEARCH ASSISTANT

Applications are invited to work on a geochemical study of laterites, concerning their profiles and composition. Neutron activation analysis and other radiochemical methods will be employed to determine the distribution of major, minor and trace element components. Knowledge of these techniques will be given to new methods for extracting elements from such deposits.

A candidate should hold a good Honours degree in Chemistry or Earth Sciences and the appointment would be for a period of three years. Where appropriate, candidates will be registered for an MPhil or PhD degree.

The salary would be in a range from £5,985 to £6,850 plus London Allowance and would depend upon age, qualifications and experience.

Applications should be sent to Dr. D. J. Short, Morris and Short, Senior Nuclear Science Centre, Brunel University, Uxbridge, Middx. UB8 3PH. Tel. Uxbridge 37188 Ext. 2401 or 3051. H10

Personal

IMMEDIATE ADVANCES £100 to £50,000. Written terms on request. Lowest rates. Mr. Cover, 43 Bowes Piccadilly. 01-499 8644 or 499 5416. H10

Colleges and Institutes of Higher Education

Royal Military College of Science, Shrivenham

Lecturers/Senior Lecturers

The College is a residential establishment, running first degree and post-graduate CNAA courses. Army Staff courses and specialist courses, for both civilians and military students. It has an academic staff of over 100, whose duties are similar to those of University Lecturers. There are comprehensive laboratory, computing, workshop and library facilities, and staff are given every opportunity to become involved in research and development work, and extend their external contacts.

Electronic Systems Engineering

The Electronics Branch is responsible for instruction in the principles of electronic devices, signal transmission and processing through to the application of these topics to analogue and digital electronic/telecommunications systems including microprocessor, radar, and C3W engineering. The lecturer appointed will be expected to take an interest in one of the topics listed above, but the post will be mainly concerned with electronic and telecommunications systems engineering. For further information, contact Professor C J Harris/Professor P C J Hill on Swindon (0793) 782551 ext 330/290.

Candidates must have a first or second class honours degree or equivalent in electrical engineering or applied physics (with electronics). Experience in the field of electronics or telecommunications is highly desirable and recent involvement in the design or R&D aspects of telecommunications, radar, and/or guidance systems engineering will be advantageous. *Ref: S(E)908.*

Computing Science

The Computing Science Branch is responsible for developing and researching into the application of computers to information systems, econometric modelling, operational research and financial modelling. DEC VAX-11/80, Perkin Elmer 3200 and PDP 11/56 machines are maintained and operated plus several microprocessors. Programming languages in use are CORAL 66, ADA, BCPL, ALGOL, FORTRAN and BASIC. The successful candidate will be expected to undertake teaching and project supervision in various aspects of computing science, including data bases, operating systems and programming languages, at undergraduate, graduate and specialist levels; prepare and supervise practical work in support of teaching, and systems software in support of research, on the College's main frame and mini-computers.

Candidates must have a first or second class honours degree or equivalent in computing science or a related discipline. Experience at the latest level, particularly with any of the machines or programming languages used by the College, will be advantageous. *Ref: S(D)908.*

Appointment will be as Senior Lecturer (£8205–£10320) or Lecturer (£5175–£6860) according to qualifications and experience. Starting salary may be above the minimum at each level. Promotion prospects to £13000 and above. Accommodation may be available for single staff.

For further details and an application form (to be returned by 26 February 1982) write to Civil Service Commission, Alencon Link, Basingstoke, Hants, RG21 1JB, or telephone Basingstoke (0256) 68551 (answering service operates outside office hours). *Please quote appropriate reference.*

HEAD OF COMPUTER SERVICES

Computing resources in the College include a 1Mb Norsk Data ND-100, providing multiaccess and batch services, a Hewlett Packard graphics mini-computer and about 40 general purpose micro-computers.
The successful applicant will have a thorough knowledge of computing and computers, proven administrative ability and preferably experience of providing computer services in higher education.

Salary: Burnham Head of Department Grade IV. £12,783 – £14,331

Application forms and further details may be obtained from:

The Personnel Office
Hull College of Higher Education
Inglemire Avenue, HULL HU6 7LU
Tel: (0482) 446506

Hull College of Higher Education

HEAD OF SCHOOL MARINE ELECTRONICS & COMMUNICATIONS

Grade V: £13,914 – £15,462

Application forms and further details may be obtained from:

The Personnel Office
Hull College of Higher Education
Inglemire Avenue
HULL HU6 7LU
Tel: (0482) 446506

Closing date for receipt of completed application forms – 12th February 1982.

Hull College of Higher Education

Courses

BIRKBECK COLLEGE
University of London

MSc Solid State Physics & Devices

By Evening Study

Two-year part-time evening course starting in October 1982 subject to University approval of regulations and to sufficient enrolment. Early application essential.

Lectures one evening a week for two years with second evening for first half of each year. Experimental/theoretical project requires extra evening in second year.

Outline syllabus: quantum theory of solids, zone theory, band structure, lattice vibrations, transport in metals and semiconductors. Magnetic and optical properties of solids. Semiconductors and solid state devices. Amorphous semiconductors.

Applicants should have second class honours in Physics or Physics with Mathematics. Forms and further details from the Registrar, Birkbeck College, Malet Street, London WC1E 7HX. Tel: 01-637 9683 (answering machine outside office hours).

BIRMINGHAM
UNIVERSITY OF ASTON

Department of Modern Languages

MASTER'S DEGREE IN CONTEMPORARY FRENCH AND GERMAN STUDIES

Applications are invited for a part-time course leading to the degree of MSc in Contemporary French and German Studies. The course is intended for graduates in languages, history, politics and the social sciences. It is designed for serving teachers who wish to acquire post-graduate qualifications in the area of contemporary society and Germany as well as for employers in industry and commerce whose firms are developing links with our European partners.

Candidates must have at least a good working knowledge of French and/or German. Admission will be by interview. Closing date for applications April 30th 1982.

Full details of syllabus, timetable and application forms from the Continuing Tutor (DCE), Department of Modern Languages, University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET. H21

WALES
U.W.I.S.T. FIELD CENTRE
Newbridge on Wye, Powys.

Self catering/self tuition. £6.66 per person p.w. Still some vacancies. Contact Curator. Tel: 280 765 508. H31

Announcements

OUTPOSTS POETRY QUARTERLY. Poems in any language (future language) or annual Poetry Competition. £2 prize with book token. S.A.E. to Howard Sergeant, 6 Burnsall Rd, Walton-on-Thames, Surrey. H25

Colleges of Further Education

LONDON
INNER LONDON EDUCATION AUTHORITY

SOUTH WEST LONDON COLLEGE

VICE PRINCIPAL (ACADEMIC)

Second Advertisement

Applications are invited for the post of Vice Principal (Academic) to commence in September 1982 or earlier if possible. Candidates should be graduates in any discipline and normally qualified with professional teaching and educational experience at a senior level.

This College has an establishment of two Vice Principals.

Salary £17,649 including London Allowance.

Assistance may be given towards household removal expenses.

Further information and application forms obtainable from the Chief Administrative Officer, West London College of Art and Design, Pelipar House, 9th Floor, Tavistock Place, WC1H 9SD. Surrey, to whom they should be returned within 14 days of this advertisement. H19

Colleges of Art

LONDON
Borough of Newham

EAST HAM COLLEGE OF TECHNOLOGY
High Street South, London, E6 4ER.

Principal: K. R. BISNUP, BSc. (Econ.) FRSA.

DEPARTMENT OF ART AND DESIGN

LECTURER II IN GRAPHIC DESIGN

We are looking for an energetic and enthusiastic Lecturer to teach on our Higher Diploma course. This is a course with a considerable reputation, not for its own merits only but because it is the only London course leading to offer a DipAD/BTEC HND/Diploma in September, 1982.

Candidates should be practising graphic designers, preferably with some teaching experience or with the ability to convey to students a knowledge of young designers in the 'eighties.

Salary: £6,468 – £10,656 p.a. plus £759 London Allowance.

Application forms and further details may be obtained by writing to the Vice-Principal enclosing a self-addressed envelope.

Completed forms should be returned within 14 days of the appearance of this advertisement. H19

SURREY
COUNTY COUNCIL

WEST SURREY COLLEGE OF ART AND DESIGN

Research Lecturership in the History of Textiles (Half full-time)

Applications are invited for this appointment in the Department of History of Art and Complementary Studies which will be from 1 April 1982, or as soon as possible thereafter. The post will be subject to annual renewal. For the first year, apart from making a small contribution into the Department's teaching programme, the lecturer will be expected to pursue a specific research topic concerned with textiles and to write up the results as such as a higher degree or an exhibition or a publication.

Salary (within half the Burnham F.E.C. scale for Lecturer II) £3,213 rising Surrey Weighting Allowance £4,017 to £6,426.

Further information and application forms obtainable from the Chief Administrative Officer, West Surrey College of Art and Design, Pelipar House, 9th Floor, Tavistock Place, WC1H 9SD, Surrey, to whom they should be returned within 14 days of this advertisement. H19

Colleges of Further Education cont

RICHMOND UPON THAMES EDUCATION COMMITTEE

Richmond upon Thames College (Tertiary)

APPOINTMENT OF PRINCIPAL (Group 7)

Applications are invited for the appointment of Principal of this Group 7 tertiary college. The vacancy arises from the promotion of the present Principal.

The College was established in 1977 as the first tertiary college in the Greater London area. All academic and vocational provision for 16-19 year olds in the borough is concentrated within it, and a number of vocational courses for older students are also offered.

Candidates must have high academic qualifications, relevant teaching experience, and proven management ability at senior level.

Current salary: £21,261 (inclusive of Outer London Allowance).

Further particulars, and forms, returnable by Monday, 15th February, 1982, available from the Director of Education, Regal House, London Road, Twickenham, Middlesex TW1 3QB.

Miscellaneous

THE INTERNATIONAL BROADCASTING TRUST

Seeks

An Education Officer

Salary @ £10,000 p.a.

The IBT and its associated production companies have been set up to promote the educational use of television to help make the British public more aware of the needs, problems and cultures of developing countries and the related issues of world development and interdependence.

The IBT education officer will play a major role in ensuring the production of educational materials and activities linked to television production output and in the context of the educational objectives of the IBT.

Write for details and send applications (by February 12, 1982) to the Chairperson, IBT, c/o War on Want, 467 Caledonian Rd., London N7.

The IBT is an equal opportunity employer.

Administration

LEICESTER UNIVERSITY

Students Union

PERMANENT SECRETARY

£12,305-£15,410 pa

Applications are invited from suitably qualified and experienced persons for the post of Permanent Secretary to the Students Union. The man or woman appointed will be the senior member of staff with overall responsibility for administration, finance, commercial activities and staffing.

Candidates must have proven management experience, a sound knowledge of financial procedures and have the ability to communicate clearly and to relate well to others at all levels.

For further details and an application form, please write to: The President, Students' Union, University of Leicester, LE1 7RH or telephone Leicester (0533) 554554. Closing date for receipt of applications is 26th February, 1982.

BRIGHTON POLYTECHNIC STUDENT UNION

Requires Administrative (Financial) Officer

Must be Unemployed.

Must be committed to student and Trade Unionism. Starting Salary £4,614 (negotiable). For details contact Brighton 681288. H11

Holidays and Accommodation

U.S. PROFESSOR and family, 4 beds, 2½ baths, near Boston, seeks house/car exchange or rent in/near London, March 15-Apr. 15. Details from Mrs. Spicer, The Barn, Thorverton, Exeter. 0392/ 860807 (agency) H25

Overseas

Western Australian Institute of Technology

Dean of Academic Affairs

The Council of the Institute invites applications and enquiries for the position of Dean of Academic Affairs.

The Dean is responsible for academic leadership and an overview of the Institute's academic standards. Responsibilities include assisting in the development of policy and overall administration of the Institute; interaction with State and Commonwealth authorities for the registration and accreditation of courses; interdivisional co-ordination of Institute policies; effective contact with industry, business and relevant educational and professional bodies.

As Chairman of one of the six Divisions of WAIT, the Dean is in the second level of management, responsible to the Director for the Division of Academic Affairs. This Division includes the Institute's Library, Computing Centre, External Studies Department, Institutional and Staff Development Unit, the offices of the Academic Secretary and Academic Planning, and the Centre for Communication and the Arts.

It is expected that applicants should possess highest academic qualifications with experience equivalent to a Chair at a University or Head of School (Campbell scale) at a major college.

Salary: $42,904 per annum.
Additional support: Expense allowances normally associated with a position of the level are available. Also fares for appointee and family plus assistance with removal expenses are payable.
Applications: Details, including names and addresses of three referees, should be submitted in duplicate not later than 26th February 1982 to the Migration Officer, Western Australia House, 115 Strand, London WC2B 0AJ, from whom a brochure containing further information may be obtained.
When applying please quote position reference number 440 HR5.

REGIONAL TECHNICAL COLLEGE ATHLONE

CO. WESTMEATH VOCATIONAL EDUCATION COMMITTEE

The Regional Technical College Athlone was established in 1969 to provide specialised courses leading to certificate, technician, professional and degree awards, which are designed to meet the requirements of industry. The College has grown in size and has approximately 2,000 students. A large extension has recently been completed to meet further expansion.

Vacancies for lecturing staff exist in the following areas:

LECTURER I

A. Plastics Technology
B. Accountancy/Management Studies
C. French/German

COLLEGE TEACHER

D. Electrical Maintenance

Qualifications and conditions of service as laid down by the Department of Education. The number of increments which may be awarded for previous suitable experience is normally a maximum of five.

Salary Scales:

LECTURER I IR£9,878-£13,923

COLLEGE TEACHER IR£7,567-£12,941

Application forms and particulars of the posts are available from the Principal, Regional Technical College, Athlone, Co. Westmeath, Ireland, with whom completed applications should be lodged *not later than 6.00 p.m., 16th February, 1982.*

Committee's Office,
Bridge House,
Bellevue Road,
Newbridge.

S. Ó. LOCHLAINN
CHIEF EXECUTIVE OFFICER

free university amsterdam

Applications are invited for the

chair in economic and social history (m/f)

The succesful candidate will be responsible for coordinating teaching and research in the economic and social history departments of both the Arts and Economics faculties.

Preference will be given to those applicants who have wide teaching experience and who are familiar with application of economic theories.

Applicants will be expected to agree with the charter of the Free University as a Christian institution.

Further particulars may be obtained from the chairman of the appointments committee, prof.dr. A.Th. Deursen, tel. Amsterdam, 548 30 33 or 41 42 09.

Applications, together with a curriculum vitae, a list of publications and the names of referees, should be sent, quoting vacancy reference number 0451-0072, within six weeks of the appearance of this advertisement to:
Free University, Personnel Department, De Boelelaan 1105, Amsterdam, The Netherlands.

VU

Cornell University seeks **Associate Professor of Theatre Studies** to begin duties **August 1982**

This is a tenured position, involving a major commitment to scholarship, supervision of MA/PhD. students, and graduate and undergraduate teaching. The position will be defined by the candidate's specializations in any combination of two of the following: Dramatic Theory and Criticism, Dramatic Literature and History, Contemporary Theory and Performance Theory, Playwriting, and Dramaturgy.

Applicants must have a Ph.D., substantial publications, and a distinguished teaching record. Salary competitive.

Applications, including a complete curriculum vitae, examples of published scholarship, and names of three references, should be sent to: Professor Don Frederickson, Chairman, Department of Theatre Arts, 104 Lincoln Hall, Cornell University, Ithaca, New York 14853. Deadline for submissions is March 15, 1982.

Equal Opportunity/Affirmative Action Employer.

Cornell University seeks **Assistant Professor of Theatre Studies** to begin duties **August 1982**

This is a tenure-track position, involving a major commitment to scholarship, supervision of MA/PhD. students, and graduate and undergraduate teaching. The position will be defined by the candidate's specializations in any combination of two of the following: Dramatic Theory and Criticism, Dramatic Literature and History, Contemporary Theory and Performance Theory, Playwriting, and Dramaturgy.

Applicants must have a Ph.D., publications, and teaching experience. Salary competitive.

Applications, including a complete curriculum vitae, examples of published scholarship, and names of three references, should be sent to: Professor Don Frederickson, Chairman, Department of Theatre Arts, 104 Lincoln Hall, Cornell University, Ithaca, New York 14853. Deadline for submissions is March 15, 1982.

Equal Opportunity/Affirmative Action Employer.

BEIRUT UNIVERSITY OF

Starting in October, 1982, faculty positions will be available in Accounting and Auditing. Inquiries are invited from candidates with Doctorates, or from CPAs or Chartered Accountants with teaching experience. In addition to teaching and supervising research, duties may include participation in Executive Development Programs on the University campus or in neighbouring countries. The usual contract is for three years with rank and salary dependent on previous research, business and teaching experience. Visiting appointments of shorter duration are also possible. On normal three year contracts round-trip travel is provided for the appointee and family. Also provided are educational allowances, lease of basic furniture, retirement plan, excellent medical care, hospitalization plan at reasonable cost. Send detailed resume to: Miss Melanie Ann Heath, Bill House, 1 Little New Street, London EC4A 3TR. Interviews will take place in London in early February. H18

ALBERTA UNIVERSITY OF

EDMONTON CANADA T6G 2E6

Department of Germanic Languages

Invites inquiries regarding programmes with basic emphasis leading to M.A. and Ph.D. in literary or philological specializations. H19

Research

CAMBRIDGE
LUCY CAVENDISH COLLEGE

RESEARCH FELLOWSHIP

Applications are invited for a Research Fellowship open to persons who have or will have a special interest in Cambridge and wish to take up or return to it for two years after a break in their career. The Fellow will be expected to reside in Cambridge during the award. The size of the award will depend on the circumstances of the successful applicant and does not include free accommodation. Particulars obtainable from the College Secretary, to whom application for the Fellowship should be made by the closing date for applications, 1st March 1982. H10

Research

MANCHESTER THE UNIVERSITY OF

RESEARCH ASSOCIATE IN CHEMISTRY

Applications are invited for this postdoctoral post, for work on problems encountered in the industrial compounding of silicone rubbers. This will involve the synthesis of a variety of di-alkyl siloxy compounds and a study of their interaction with finely divided silica used as a filler for silicone rubbers. The work will be supervised jointly by Dr R.G. Colclough and Dr I. M. Bruce and will also involve liaison with industry. Appointment is for one year from 1st April, salary range £6,070 - £7,360 p.a. Applications, including curriculum vitae and names of two referees should be sent as soon as possible to Dr Colclough or Dr Bruce, Department of Chemistry, University of Manchester M13 9PL. H10

REMINDER

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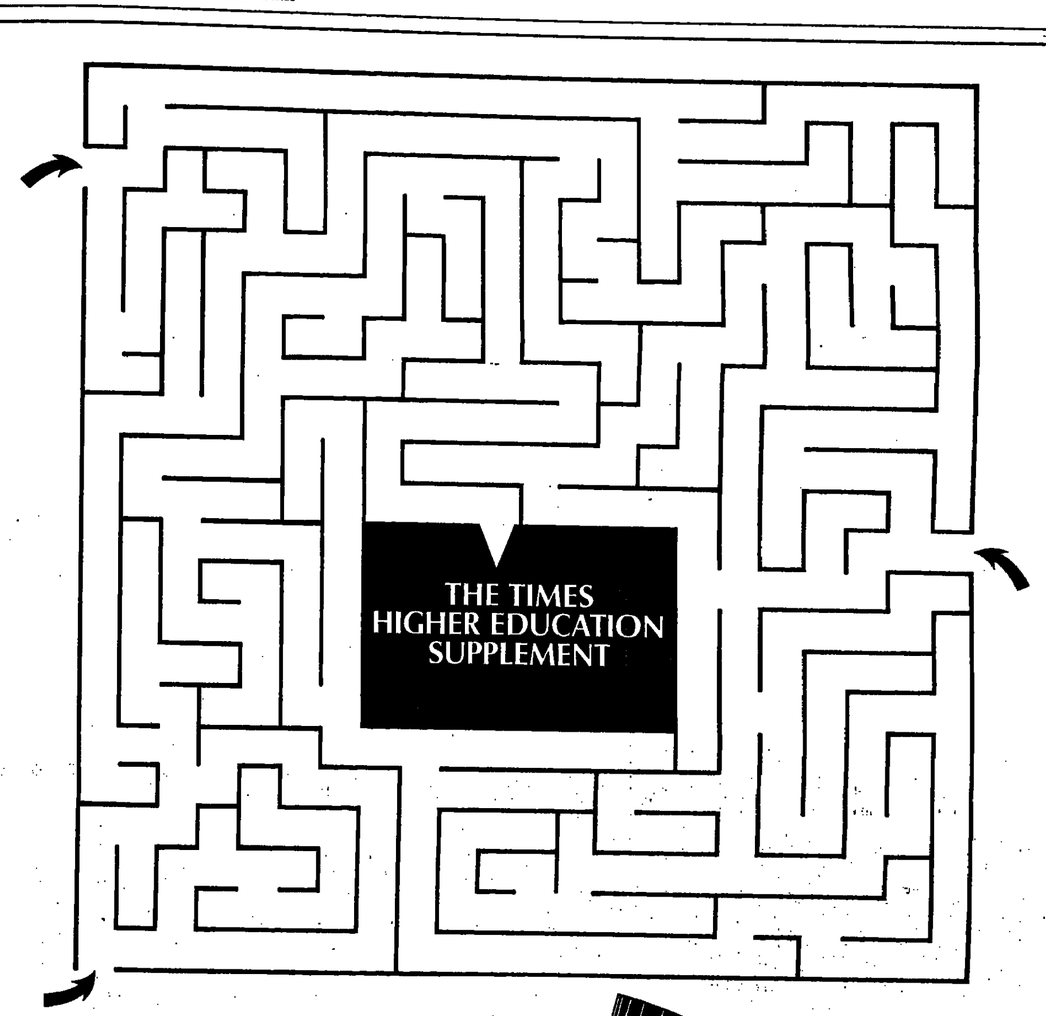

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Don's diary

Monday

The Californian week starts early – in time to have children at school by 7.40am. (Their lunch is at 10.55, and they are back home by 2.30.) Fortunately, the proposal to hold a departmental meeting at 7am was voted out by a reasonable majority (which included me), so my own college day does not begin until 9. Two Western Civilization classes this morning, each lasting one hour; then a two-hour session in the afternoon. An "open" admissions policy, coupled with completely free tuition, leads to enormous enrolments, and ensures that tutors lose many of their students by the end of the course. Now well into the 17-week semester, I have almost attained the predicted drop-out rate of 50 per cent. So, with only about twenty students, I can more easily vary the formal lecture with the informal seminar (though students seem more accustomed to the former). Again remember too late that I should have referred to the textbook, with which students obviously expect to work closely.

Tuesday

Our exchange-house is wonderfully central and gives us splendid views of the downtown skyscrapers (about two miles away). San Diego is hilly, and split up by numerous canyons which defy the most orderly town-planners' attempts to make rectangular street patterns. Roads end at canyon edges, and long detours may be necessary to re-join the same street on the other side. Even native San Diegans admit to difficulties: one, who actually lives on the same street as us, but two miles and several canyons to the east, had to telephone for directions, after getting lost on his way to dinner the other night. But each morning I need to wind my way for only a couple of miles, through palm-tree-lined residential streets, before reaching the freeway-system, which virtually gives access within twenty minutes to any part of this million-population city. Four miles north, in fact over as many minutes, I arrive in time to pick up my mail. This includes a Leeds University Overseas Prospectus for me to display, (how did the enterprising Registrar know I was here?), an invitation to earn a doctorate with remarkable speed and at a saving (if I hurry) of at least $800, and an order form for *Playboy* magazine with an "educational" discount.

Wednesday

One of my teaching assignments here is a six-week course – part of an accelerated programme, enabling students to collect three credits in minimum time. This involves a two-hour class each afternoon on Monday to Thursdays – a schedule which appears somewhat relentless by the fifth week, despite the high proportion of "mature" students in the class. These students, in fact, have been at pleasingly responsive, that I have become belatedly aware of a major difficulty: that, with just over a week to go, I still have 2,000 years of western civilization to get through. That means 500 years per class, 250 years an hour.

Thursday

At least with my Classical Civilization courses, the problem is not so acute: to be stuck in the fifth century BC seems less reprehensible when one's target is Constantine than when it is Calvin. So I drive past the Center for Rational Therapy, the ever-open Donut House, the churches purporting to dispense the "safest" sex in the world", and on to the freeway with a greater conscience for the morning's class. It is sheer joy to feel sorry for Ronald Reagan. There he was ready to celebrate his first year as a really successful actor and suddenly people were calling him a racist. And all because of a silly misunderstanding.

It began because some private schools in America are (frankly not too keen on black people. Some like the Goldsboro Christian schools in North Carolina, do not accept black children. But not *all are* that discriminating. Bob Jones University for instance forbids interracial dating but did give Ian Paisley his (honorary) doctorate. Anyway, they are a mixed bag.

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To make a clean breast of things and put the record straight the president made statement number two. He would never support racism and had all along intended to send Congress a bill restoring the Nixon rules. True, statement number one had not mentioned the bill, but that was an oversight.

Can you believe that even after statement number two the newspapers continued to make a fuss? Black leader Jesse Jackson said the gulf between the White House and the black people was wider than it had been for 50 years. And the US Commission on Civil Rights said that Reagan was wrong: Congress and the courts knew all about the Nixon rules and no new bill was necessary.

So President Reagan made statement number three. OK, he said the 100 schools would not get their tax exempt status. He still thought a new bill was needed, and was sending one to Congress, but meanwhile the government would act as if it had already been passed. The whole thing, he admitted, had not been handled too well.

Who had bungled it? Well, to be fair to Mr Reagan, he did not try to duck the blame. The *White House* sources told everybody that Reagan's counsellor, Ed Meese, was to blame but the president admitted that he originated it. As he put it, "The buck stops at my desk."

When all's said and done, Mr Reagan did not come out as well as he deserved. After all, once Congress has passed his new bill, everything will be exactly as it was before. In fact, since statement number three, *everything* is exactly as it was before.

But you can understand why the president gets so much stick. When he was just a movie star, people understood about the willing suspension of disbelief.

Peter David

Friday

Official day-release for me today, since all exchange-teachers from the Southern California area have been invited to a meeting, organized apparently from Washington DC. Arrive by 8.30, in time for the ubiquitous coffee and doughnuts, and an explanation that, owing to financial constraints, there would, after all, be no representative from Washington; and we would have to pay for our own lunch. Proposition 13 begins to bite hard.

Lectures from local administrators highlight some of the major current issues, as they see them, in Californian education: a "back to basics" movement is gaining strength in primary schools, with the relegation of creative subjects to a very minor position; and teachers are to be tested, to ensure *their* literacy.

The English are made to feel at home, with the recurring theme of money: the prospect for public education looks bleak, and there is even talk of charging students at community colleges tuition fees – which, at $100 per student per annum could apparently raise a staggering $70m. Exchange-teachers just wish the pound would improve against the dollar.

Saturday

As in Britain, public protestations of impending financial ruin are counterbalanced by personal generosity. So the weekend, as usual, includes little time for essay-marking. (An additional argument in favour of multiple-choice tests?) Ken (history department chairman and part-time avocado-grower), takes us in his yacht to see whales migrating south, down the Pacific coast to warmer waters off Mexico. Unfortunately, no whales are sighted before we are encouraged to return by three seasick children. So back to the yacht-club pool for a swim and a sit in the hot-tub, where I try to devise ways of avoiding the return to freezing England.

Sunday

Picnic brunch on the beach. Reclaimed land has helped to form a 4,600-acre recreation area for San Diego, with 35 miles of beaches and facilities for sailing, swimming, surfing. While Carl (geography) cooks omelettes on one of the barbecue grills lining the sea-shore, Don from the English department serves champagne. This is the place and the way to get, as they say here, in southern Californian style: "laid back".

Beverley Southgate

The author is principal lecturer in the history of ideas at Hatfield Polytechnic. He is on a year's exchange at Mesa College, San Diego, California.

Question. What do President Mobutu and Sir Keith Joseph have in common?

Answer. They both appear to believe that professionally trained social scientists are dangerous subversives.

The President's approach is straightforward. Consider the story of Ernest Wamba-dia-Wamba, a senior lecturer in history at the University of Dar es Salaam and a citizen of Zaïre. He studied and has taught at various American universities, including Brandeis and Harvard, specializing in economic development and the philosophy of history. His Tanzanian colleagues describe him as a "very competent teacher" and "talented scholar" who "has stimulated considerable debate especially on philosophy and methodology in the history seminar series which he has co-ordinated".

Last December he returned to Zaïre to visit his sick father. As he landed, he was arrested along with others who came to meet him by the military intelligence and security or G2 Service, and was detained in a military camp. His wife and children were interrogated. The G2 Service, run by the President's brother-in-law, has a particularly bad reputation for ill-treating and torturing detainees, held without charge or trial. The Zaïrean authorities have said that he was arrested for possessing subversive documents and for having had links with Zaïrean opposition groups outside Zaïre. But in Zaïre most social science textbooks count as "subversive", and he has had no links with groups using or advocating violence. Amnesty International considers him a "prisoner of conscience". He is detained without charge or trial and has had no chance to consult a lawyer or defend himself in a court of any kind. His Tanzanian colleagues have expressed themselves "extremely concerned" about his fate and about the intolerable anxiety under which his wife and his three small children currently live. There is good reason to fear he is being tortured, even as you read this.

President Mobutu attacks social scientists. Sir Keith Joseph's approach is altogether different; he attacks the social sciences, by seeking to suppress the research and training on which they depend. According to this paper, he is said not to believe the social sciences "exist" and to believe that much social science research has a systematic left-wing bias.

Whether you accept the "conspiracy" or the "*Yes Minister*" theory of the current attack on the Social Science Research Council, it seems plain to me that this is the second round in the battle whose first round was so memorably lost by Professor Julius Gould some years ago. It is, therefore, no surprise to see Professor Gould back on the battlefront, firing off a letter to *The Times*. The trouble is that Professor Gould is a Professor of Sociology and finds himself facing both ways – a dangerous thing to do on the battlefront – sniping at the SSRC and pleading for "a firm base for fundamental social inquiry". Professor Gould's own contribution to such inquiry, the so-called Gould Report, attacked "marxists" and "radicals", whom it contrasted definitionally with "scholars". But in this second round, the "scholars" are no longer safe either (nor indeed is Professor Gould); the onslaught is on a much wider front and comes from on high. Some optimistic souls inside the SSRC seem to believe it can be successfully resisted, chiefly through the good offices of Lord Rothschild. I doubt it. Indeed, it has already inflicted substantial (and, in terms of individual careers, irreparable) damage and will certainly inflict much more.

Some social scientists have rushed to deny, and others to announce, that they practise a subversive trade. An absurd exchange has taken place as to whether the facts are left wing (though this statement was apparently misreported). It seems to me that professional social inquiry, whether "fundamental" or applied, or even just honest and humdrum, subverts only the purposes and interests of those whose business is to mystify and confuse people about the world. Rather a good instance of this is the extensive research on poverty in contemporary Britain which certainly subverts whatever purposes Sir Keith may have had in denying, in his contribution to "fundamental social inquiry", in his recent book on *Equality*, that any significant poverty exists in Britain today.

But professional social science is not the only kind there is. There is also what, for want of a better term, I shall call state social science. This is practised, not by trained professionals, but by governments upon entire societies and economies, sometimes in the face of all contrary evidence and arguments. The results can be catastrophic. Consider the English government's application of economic theories to Ireland in the 1840s, horrendously magnifying the effects of the famine. Consider the imposition of marxist-leninism-stalinism upon eastern Europe after the war, and its counties victims in the Gulag Archipelago and elsewhere. Consider our present Government's testing out of its doctrines upon a decaying and somehow still civilized society, and all its obvious and less obvious victims, not least the millions of unemployed. Professor Galbraith may be grateful to us for providing a laboratory for the disproof of Chicago school economics. It is all very well for him. So Sir Keith *does*, after all, believe in social science. Not of course sociology, or even economics as practised by most reputable professionals, but rather as revealed in certain key texts, from Adam Smith to Hayek and Friedman. Such belief is not to be shaken by professional, let alone "fundamental", research.

All of which only illustrates an old truth, central to the philosophy of the social sciences: that, whatever else they are, they are not value-free. It is a truth with immediate and wide-ranging political consequences – as Ernest Wamba-dia-Wamba, in his prison cell in Kinshasa, is only too aware.

Finally, an "update" on two stories from a previous column. Last November, I wrote about Dogan Tarkan, a Turkish socialist, and Kay Hassan, a black artist from Soweto, who were both given a bad time at Heathrow. The good news is that Dogan Tarkan had been granted political asylum with full refugee status. The bad is that Kay Hassan's position is still uncertain. He was to have been removed on Christmas day but was not; and the Home Office is still, presumably, deciding.

Since Steven Lukes's column went to press Ernest Wamba-dia-Wamba has been released from gaol this week.

The dangers of social science

Steven Lukes

America today

Reagan overacts the racist

Peter David

You have to feel sorry for Ronald Reagan. There he was ready to celebrate his first year as a really successful actor and suddenly people were calling him a racist. And all because of a silly misunderstanding.

It began because some private schools in America are (frankly not too keen on black people. Some like the Goldsboro Christian schools in North Carolina, do not accept black children. But not *all are* that discriminating. Bob Jones University for instance forbids interracial dating but did give Ian Paisley his (honorary) doctorate. Anyway, they are a mixed bag.

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LETTERS TO THE EDITOR

Give the DipHE credit where credit is due

Sir – Your news item (*THES*, January 15) on the current state of the DipHE was not only a masterpiece of imprecision but also served to reinforce the presumption that "a continuing scarcity of diplomates going straight into employment" implies that the diploma has somehow failed to secure its place in higher education.

Certainly the providers of such courses are concerned to ensure that employers are aware of the nature and level of the DipHE and that successful students do obtain appropriate positions as a result. But those of us involved in the development and management of DipHE courses are far more centrally concerned with the provision of a more flexible route into higher education than is available in orthodox undergraduate structures, with the creation of opportunities for the mature student to embark on degree level studies, and with the generation of patterns of transfer between courses and across institutions. It is clear from the results of the ACID/DES survey you quote in your account that in all these respects the DipHE is being highly successful.

Neither ourselves nor the CNAA believe that GCE passes at O and A level are necessarily the most appropriate measurement of the ability of mature students and the results obtained by the mature student without formal qualifications after completion of the DipHE compare very favourably with degree results obtained by "normal" students on "normal" courses.

That the ACID/DES survey showed few diplomates going directly into employment is evidence of the success of the DipHE in enabling students to transfer into degree courses and of the aspirations and ability of our (largely mature) intake.

You say that "only 36 of the 654 students who were awarded the DipHE in 1980 were known to be employed or on training schemes". This is not so. In the first place the figure of 36 comes from a table of statistics covering only 222 of the total of 654 diplomates. But in any case you omit to mention that another 14 of the 222 obtained employment or training at a level normally restricted to graduate entry. Fifty out of 222 begins to look quite respectable, especially when you consider that of all the students obtaining a DipHE in 1980 the vast majority transferred successfully on to a degree course either in their own institution or elsewhere and the majority did so without any loss of time – ie they transferred direct into the third year of the degree course.

Yes, we would like to see larger numbers of students viewing the diploma as a terminal award, but given that the majority wish to use it as a mechanism for delayed choice degree specialization – and do so very successfully, should we not give credit where credit is due?

Yours faithfully
WILLIAM JOHNSTON
DipHE Unit
Manchester Polytechnic
Cavendish Street,
Manchester.

Public sector funding

Sir – May I make the following observations on your editorial "Ripples in the Pool" (*THES*, January 22).

1. As a member of the Stephen Jones working party I reject the proposition that the timetable of the committee was such that data could not have been collected. There was resolute refusal by civil servants to collect data from OMEs (colleges and institutes) which was available from polytechnics. Excuses offered were (a) manpower was short in the DES, (b) the colleges and their l.e.a.s could not respond in time, and (c) Mrs Thatcher would oppose additional data collection.

2. To talk of the "idiocy of centralized bureaucratic financial planning" is of itself idiocy if this view is based on the machinations of the DES. I have no doubt that the new Board of Local Authority Higher Education will assemble the necessary data from which the financial judgments can be made.

3. There is no evidence that the distribution of the pool deliberately intends a discrimination against "the ten or twelve most vulnerable colleges" though the consequence of the treatment of OMEs separately from polytechnics inevitably exacerbated the financial weakness of smaller institutions. The Jones working party recognized throughout the need for a national body to make academic judgments alongside financial allocations and I believe recognized that quality work in small colleges, as well as large, should have equal chances of survival.

4. It was not a "semi-accident" that a line was drawn between polytechnics and OMEs by the Jones working party – it was a deliberate step. Data did exist for the *major* institutions of higher education but the committee (without my support) determined that in justice all OMEs should be treated *pari passu*. This view was reached with the support of DES officials who were, I believe, anxious that the Model B grouping of colleges would not emerge within the Jones' recommendations at a time that clandestine discussions were taking place between the DES and the l.e.a.s on the establishment of the Interim Committee for Local Authority Higher Education.

5. The abject unreliability of the Further Education Statistical Record as a basis of calculation for the distribution of the Advanced Further Education Pool, together with the false distinction drawn between major colleges and institutes of higher education and polytechnics, are the principal reasons for the inequities of the proposed 1982–83 AFE pool allocation but these exist in part as a result of the almost stoic refusal by the DES to collect the necessary data over a two year period.

Yours faithfully,
NEIL MERRITT,
Director,
Ealing College of Higher Education.

Accounting exams

Sir – In *The THES* (January 22), it was announced that the Institute of Chartered Accountants in England and Wales is considering whether to revert to its previous educational policy of operating a central examination for foundation level students.

It should be stated, however, that this policy has not been agreed with the polytechnics who, as planned by the ICAEW, should continue to operate foundation courses. It remains the policy of the Council of Departments of Accounting Studies that, for this course whose primary aims include the broadening of a student's academic horizons, a centrally set examination is a very considerably less appropriate means of assessment than an internal examination with external moderation.

Yours faithfully
R E NUNNS
Chairman, CODAS Polytechnic Liaison Group
Brighton Polytechnic

Politics lecturers

Sir – Your fair and full story about the position of polytechnic lecturers in politics (*THES*, January 1) omitted one very salient fact.

It is published as *Studies in Public Policy* No. 95 by the CSPP in collaboration with the Political Studies Association, which sponsored the original survey.

PROFESSOR RICHARD ROSE,
Centre for the Study of Public Policy,
University of Strathclyde.

Headlines

Sir – Herewith a brief attempt to solve an evidently agonising problem (Letters to the editor, *THES*, January 22).

Per capita, per caput, or . . . Sir, – Per head?

Yours sincerely,
L. S. PRESSNELL,
University of Kent.

History Workshop

Sir – Thank you for your concern about History Workshop (*THES*, January 22). You haven't got it quite right, though, and, like Mark Twain on reading newspaper accounts of his own death, we find your report somewhat exaggerated. We do not have a "shrinking" base of subscribers, but, notwithstanding education cuts, a remarkably steady one. Nor, by the standards of academic publication is it a small one: we have some 2,100 subscribers, many of them abroad, and sell a further 1,000 copies through bookshop and back number sales.

Some 800 people come to our annual workshops (the next one, History Workshop 16, is to be held in Sheffield in November 1982, and we are organizing an international workshop on "religion and society" for July 1983); there are between 70 and 100 people at our monthly seminars, held in a London pub; and there are a number of flourishing local groups (one of them, in Dublin, has just published the first issue of *Irish History Workshop Journal*).

It is true that, like other independent journals, we live, financially-speaking, a hand-to-mouth existence. But what has hit us is inflation: our subscription has been raised by only £2 in the last six years. We are meeting our crisis, as other journals have done, by belatedly raising our subscription price: from April 1982 it will be £10 instead of £7 p.a. And we are appealing to supporters to increase our subscriptions from 2,100 – the figure at which we have been stuck for the past four years – to 2,500. A lecture tour of Danish universities by four HWJ supporters is helping us to meet our debt.

If *The THES* wants to help journals like ours, it might consider reviewing, or at any rate noticing, our books (something which, unlike its sister publications, *TLS* and *TES*, it has signally failed to do in the past); reporting our meetings (*The Times* carried a report on last November's History Workshop, but not *The THES*); or drawing attention to pieces which might be of particular interest to your readers (eg Sheila Rowbotham's "Travellers in a Strange Country", a rivetting portrait of nineteenth century adult students which appears in the current issue of HWJ).

ANNA DAVIN, London University,
extra-mural
EVE HOSTETTLER, Isle of Dogs Community History Project
ALUN HOWKINS, University of Sussex
MICHAEL IGNATIEFF, King's College, Cambridge
TIM MASON, St Peter's College, Oxford
RAPHAEL SAMUEL, Ruskin College, Oxford
GARETH STEDMAN JONES, King's College, Cambridge
STAN SHIPLEY, Havering College of Education
BARBARA TAYLOR, Bulmershe College, Reading
JEFFREY WEEKES, University of Kent

Cruel irony

Sir – It was a cruel irony, not untypical of many which we encounter these days, that next to your article about Sir Keith Joseph's plans to introduce student loans (*THES*, January 22), this time on the grounds that graduates have more favourable job prospects, was another article headlined "Graduate job market shrinking". That the market is shrinking as a result, amongst other things, of his own prior ministerial activities, only compounds both the cruelty and the irony.

Yours sincerely,
DR BRIAN V. STREET,
University of Sussex, School of Social Sciences,
Brighton.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

University interviews

Sir – I write as a practising occupational psychologist whose working activities stretch across the whole spectrum of occupational life – central and local governments, industry, commerce and whatever. Mr Lukes' cry from the heart (*THES*, January 1) following Mr Colin Prince's letter (*THES*, December 18) on the subject of university interviews would, I think, confirm what I and my colleagues already sadly know, that despite the efforts of our breed within the UK over the last 60–70 years we appear to have accomplished very little.

More personally, it is relevant and may be of interest to recall that in the *Universities Quarterly* (December 1968) I argued the case for "The University Assessor". Significantly, this imaginative and constructive proposal was completely ignored and has been ever since.

Much of what I said in that article, however, 13 years ago plainly remains true today, but re-looking at it after reading Steven Lukes' reflections, I came across statements like "all worthwhile selection depends on personal assessment, carried out by trained and disciplined individuals": "It cannot seriously be argued that there is at this time systematic selection for university life" "How many academics – professors, senior lecturers, lecturers, etc – are trained to assess and pick men"? "'training' is the operative word. Is the university tutor required to have this training? If so, is it available? How many university tutors, for instance, engaged in picking and advising men, have ever been trained in interviewing technique?"

I note too, rather wistfully, that my article referred to an isolated and limited attempt at such a systematic selection approach (Imperial College) in which I took part in 1956 – now nearly 30 years ago!

It may be too late for Steven Lukes to persuade his Oxford college to consider the appointment of an assessor along the lines I advocated, but he should know that some help is at hand to ease his "weary" annual task and to make that "final agony" bearable and to see him through his next 15 years. I would be delighted, therefore, to spend time training him and all his Oxbridge fellows so engaged, or at the least, to talk to a group of persons involved who may be interested to learn something about picking people.

At the same time, let it be said that all of us engaged in this delicate task should expect no magic solutions, and reject any quick gimmick approach. Hard work it is, but given the right attitude on the part of the selectors and willingness to try to be systematic and disciplined, even interviewing prospective undergraduates will prove to be far from the "miserable business" Steven Lukes finds it to be.

Yours faithfully,
WILLIAM ISBISTER,
Over Ashdown,
Goldsmith Avenue,
Crowborough,
Sussex.

Linguistic support

Sir – I was surprised by Mr Sampson's remark that the LAGB is losing support because it is "concentrating on an unduly narrow segment of the full spectrum of linguistic studies" (*THES*, January 22). The truth is somewhat different. For our next meeting in March we have scheduled some 27 papers on: phonology, morphology, syntax – both pro and anti-Chomsky, semantics – formal and informal, historical linguistics, psycholinguistics, sociolinguistics, discourse annlysis, typology, etc.

Furthermore, our membership has *increased*, not decreased, every year since Mr Sampson resigned from the association some time ago. If he wishes to reconsider his position, I should be delighted to welcome him and anyone else to (re-)join our thriving association.

Yours faithfully,
N. V. SMITH
Chairman
Linguistics Association of Great Britain

Union view

The task of training a new minister

Yet another tale of ignorance and incompetence in high places. The other week I led an NUS delegation to the DES to meet the new junior minister, William Shelton. It was the day after Norman Tebbit's announcement of the new training system and we were expecting a fairly challenging and confident reaction.

Imagine our surprise when we found ourselves not only having to explain to the minister points of detail from the training proposals but also the existing system of financial support for young people in further education. He had no idea how discretionary awards and educational maintenance allowances were calculated and distributed, how much money was involved or how the policies of local authorities varied.

It got worse. After explaining to the minister why the £60m he was so proud of having wrung out of the Treasury to encourage young people to stay on in education after school, would simply disappear into local authorities' general budgets we discovered that he had unwittingly abolished a way of continuing education which thousands of young people are currently taking advantage of.

At the moment young people are entitled to study for up to 21 hours a week while retaining supplementary benefit. Figures are not centrally available but with 480 students in Liverpool using the "21-hour rule", the numbers must run into thousands on a national scale. The effect of the Tebbit proposals is to end this provision because school-leavers lose any entitlement to supplemetary benefit. No new form of financial support is to be made available to students in FE since, in the words of the minister, they're managing at the moment with pocket-money from their parents.

Perhaps our main mistake was in expecting any sign in the DES of a grasp of the issues. As they themselves implied, they have minimal direct contact with education provision whose control is dispersed among a number of different agencies, mainly colleges and local authorities.

The isolation of autonomy of mainstream education has insulated it from the impact of industrial change and mass unemployment. An entirely new agency, the Manpower Services Commission has had to be created to bypass the traditional service and respond to the crisis.

Sooner or later the DES and local and college authorities (including higher education) are going to have to wake up to what's going on. For example, the Youth Training Scheme is going to require thousands of new tutors, supervisors and counsellors who themselves will need intensive initial and inservice training.

Over the next term our work on the new training schemes will be a clear priority because we've begun to wake up to their implications for our own organization and policies. We are considering ways we can draw the new trainees into NUS membership and offer them a real service and a means of representation and self-organization. We shall be trying to force the education service to provide the educational dimension to the new training programme which YOP has so clearly lacked.

Above all else, we shall be trying to link up our work on unemployment and training with the issues which generate real heat in education, most obviously the cuts.

Andy Pearmain

The author is vice president (education) of the National Union of Students.